

TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1929

No. 23

NEW YORK SCAFFOLDING COMPANY, PETITIONER

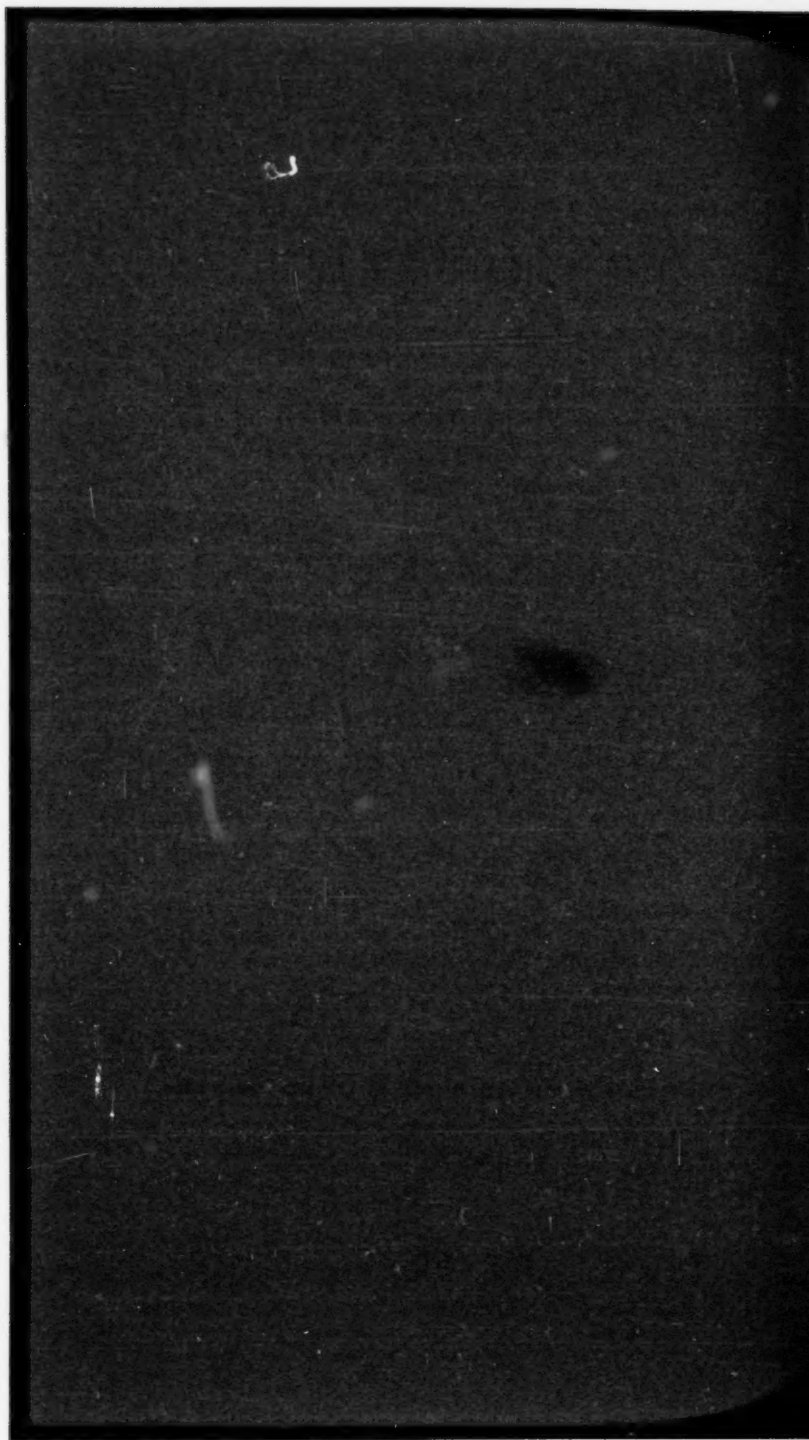
vs.

CHAIN BELT COMPANY AND ROBERT WHITNEY

WARRANT OF HABEAS CORPUS TO THE UNITED STATES CIRCUIT COURT
OF APPEALS FOR THE SEVENTH CIRCUIT

WRITING FOR HABEAS CORPUS FILED SEPTEMBER 22, 1929
WRITING AND RETURN FILED JANUARY 7, 1930

(50,180)



(26,180)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1917.

No. 713.

NEW YORK SCAFFOLDING COMPANY, PETITIONER,

vs.

CHAIN BELT COMPANY AND EGBERT WHITNEY.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT
OF APPEALS FOR THE SEVENTH CIRCUIT.

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In the United States Circuit Court of Appeals for the Seventh Circuit, October Term, A. D. 1915.

No. 2408.

CHAIN BELT COMPANY and EGBERT WHITNEY, Appellants,

vs.

NEW YORK SCAFFOLDING COMPANY, Appellee.

Mr. Wallace R. Lane, Mr. George Mankle, Counsel for Appellants.
Mr. C. P. Goepel, Counsel for Appellee.

Appeal from the District Court of the United States for the Eastern District of Wisconsin.

Placita.

District Court of the United States for the Eastern District of Wisconsin.

EASTERN DISTRICT OF WISCONSIN,
United States of America, ss:

At a stated term of the District Court of the United States for the Eastern District of Wisconsin, begun and held according to law, at the City of Milwaukee, in said District, on the first Monday, (being the third day) of January, A. D. 1916, present and presiding the Honorable Ferdinand A. Geiger, Judge.

Among other the following proceedings were had, to-wit:

Bill of Complaint.

Filed Aug. 26, 1915.

In Equity.

NEW YORK SCAFFOLDING COMPANY, Plaintiff,

vs.

CHAIN BELT COMPANY and EGBERT WHITNEY, Defendants.

Be it remembered that heretofore, to-wit: on the 26th day of August, A. D. 1915, came the above named plaintiff by its solicitors, Messrs. Goepel & Goepel, and filed its bill of complaint against defendant, Chain Belt Company, as follows:—

Bill of Complaint.

Henderson Patent No. 959,008.

To the Honorable Judges of the District Court of the United States
for the District of —, in Chancery Sitting:

New York Scaffolding Company, a corporation created and existing under and in accordance with the laws of the State of New York and having its principal place of business in the City of New York in said State, brings this its bill of complaint into this Court against Chain Belt Company, a corporation organized and existing under the laws of the State of Wisconsin, and an inhabitant of, and having a regular and established place of business in the City of Milwaukee, in the State and Eastern District of Wisconsin, in which Eastern District of Wisconsin said defendant has committed the acts of infringement hereinafter complained of, and elsewhere in the United States.

And thereupon your orator complains and says:

First. That this is a civil suit in equity for infringement of letters patent of the United States, and arises under the patent laws of the United States, and is brought in equity because the plaintiff has no adequate remedy at law.

Second. That heretofore and on or about the 19th day of June, 1909, Elias H. Henderson was the true, original, first and sole inventor of certain new and useful improvements in scaffold-supporting means, not known or used by others in the United States before his invention or discovery thereof, and not patented or described in any printed publication in the United States or in any foreign country before his invention or discovery thereof, or more than
two years prior to his application for letters patent of the
3 United States hereinafter mentioned, and not patented in
any country foreign to the United States on an application
filed more than twelve months before his said application, and not in
public use or on sale in the United States for more than two years
prior to his said application, and which had not been abandoned.

And your orator further shows that the said Elias H. Henderson, being so the original, first and sole inventor of said improvements, duly made application for letters patent of the United States therefor, and that thereupon on due proceedings had letters patent of the United States bearing date the 24th day of May, 1910, and numbered 959,008, were duly issued upon the aforesaid application in conformity with law to the said Elias H. Henderson; that the said letters patent were duly issued in the name of the United States of America under the seal of the Patent Office and were signed by the Acting Commissioner of Patents and were recorded in books in the Patent Office kept for that purpose, and contained a short title or description of the said invention or discovery correctly indicating its nature and design, and granted to the aforesaid Elias H. Henderson, his heirs or assigns, for the term of seventeen years from

and after the aforesaid 24th day of May, 1910, the exclusive right to make, use and vend the invention or discovery aforesaid throughout the United States and the territories thereof; and your orator brings here into court the original of the said letters patent or a duly authenticated copy thereof and prays that the same may be taken as a part of this bill.

Third. And your orator further shows that by valid assignments of the right, title and interest of the said Elias H. Henderson in and to the said letters patent and in and to the invention therein described and claimed, became vested in your orator prior to the filing of this bill of complaint and prior to the commission by the defendant of the acts of infringement hereinafter complained of, and that your orator ever since has been and now is the sole owner and holder of the said letters patent and of all the rights and privileges thereby conferred or intended so to be.

Fourth. And your orator further shows that it is and *even* since the acquirement of said letters patent number 959,008 has been largely engaged in different cities and places in the United States in putting the said inventions into use and practice; and that the usual manner in which your orator has carried on its said business has been to construct and lease for use to builders and others at a specified royalty or price per week the scaffolds and scaffold-supporting means, embodying the said inventions, your orator retaining the ownership of and title to the said scaffolds so used by it, and the same being returned to it upon the completion by the respective lessees of the work for which the scaffolds had been required and your orator appends hereto a view of the manner of using said inventions and has marked it Exhibits 1 and 2.

And your orator further shows that the right of your orator in and to the said letters patent and in and to the inventions therein set forth and claimed has been generally recognized and acquiesced in by the public and by that portion of the public which makes use in its business of scaffolds for buildings of the general character of those described and claimed in the said letters patent.

And your orator further shows that large numbers of builders and contractors in different parts of the United States have recognized your orator's rights and those of the prior owners of said letters patent, in the said inventions, by leasing scaffolds as aforesaid embodying the said inventions and paying therefor the royalty or price aforesaid; and that the same is at the present time being done by many builders and contractors throughout the country.

And your orator further shows that the right of contractors throughout the country and that by reason of the safety attendant on the operation of scaffolding so leased and supervised by the plaintiff and those under its authority, a grand prize was awarded, as also a medal, prints of which appear annexed hereto and marked Exhibit 3.

And your orator further shows that its aforesaid use of the said inventions has been and is very profitable to it; and that it would realize further large sums if all infringements and unlawful use of the said inventions without its consent should be prevented.

And your orator further shows that except for the doings and actings of the defendant and perhaps one or two other infringers your orator now has and enjoys and ever since the aforesaid assignments of the said letters patent to it has had and enjoyed the sole and exclusive right in and to the letters patent and inventions aforesaid.

5 Fifth. But your orator shows that the defendant, well knowing all the premises and intending and contriving to injure your orator and deprive it of the great benefits and profits which it otherwise would have received, did, against the will and without the consent or allowance of your orator, within the aforesaid Eastern District of Wisconsin, subsequent to the issuance of the said letters patent number 959,008 and subsequent to the aforesaid assignment thereof to your orator, and prior to the filing of this bill, make, use and sell for use and employment in and about buildings and for building purposes, scaffolds, and scaffold-supporting means, each and all of which contained and embodied the inventions aforesaid in the Eastern District of Wisconsin, and elsewhere, and intends and threatens to continue its said acts, all in violation and infringement of your orator's rights aforesaid and contrary to the statute in such cases made and provided, and your orator appends hereto views of some of the samples of devices complained of, and marks them Exhibits 5 and 6.

And your orator upon information and belief further shows that the said defendant by its aforesaid infringement and violation of your orator's said rights has realized and received and is still receiving, large gains and profits, but to what amount your orator is ignorant and cannot set forth, but it prays that the defendant be required to make a full disclosure thereof.

And your orator further shows that by the expenditure of considerable sums of money it has built up a large business; and it further shows that by reason of all the premises it will be irreparably damaged unless the unlawful acts of defendant shall be prevented by the order of this Honorable Court; and your orator shows that the effect of the aforesaid unlawful acts of the defendant is and will be to encourage other persons to infringe your orator's said rights and that your orator will be put to great expense in maintaining its title to said inventions and letters patent unless the aforesaid unlawful actings and doings of the defendant can be restrained as aforesaid.

Sixth. And your orator further shows that the aforesaid infringements of the said defendant have been and are to the injury and damage of your orator to the amount of at least Five Thousand Dollars (\$5000.00).

6 Seventh: And your orator further shows that heretofore your orator brought suit against one Egbert Whitney of Omaha, Nebraska, on the aforesaid letters patent number 959,008, and that after full proofs were taken and argument had in the United States Circuit Court of Appeals for the Eighth Circuit, his Honor, Judge Walter H. Sanborn, presiding, held the aforesaid patent to be good and valid and infringed by the defendant, Egbert Whitney.

Whitney, and ordered an accounting for profits and damages sustained by the plaintiff herein, with all taxable costs to the plaintiff.

And your orator further appends a copy of the controlling opinion of the Court of Appeals referred to, marking it Exhibit 4.

Eighth: Forasmuch, therefore, as your orator is remediless by the strict rule of common law and is only relievable in a court of equity where such matters are properly cognizable.

To the end therefore that your orator may have such relief as it is entitled to in the premises, it prays this Honorable Court as follows:

First. That the said defendant may be required to full, direct and perfect answer make to all the matters and things hereinabove set forth as fully and particularly as if they were here repeated and said defendant specially interrogated unto them and each of them, but not under oath, an answer under oath being hereby specially waived.

Second. That the said defendant may be decreed to account and pay over to your orator all the profits, gains, benefits and advantages which it has realized and received from all its aforesaid unlawful manufacture, use and sale of the said inventions, and further that it may pay over to your orator all the damages which would have accrued to your orator by reason of its aforesaid infringement and violation of your orator's said rights.

Third: That the defendant and its servants, agents, workmen and attorneys, and all persons in privity with it, may be perpetually enjoined and restrained by the order and decree of this Honorable Court from any further manufacture, use and sale of any scaffolds and scaffold-supporting means which contain or embody the inventions aforesaid.

Fourth: That a preliminary or provisional injunction may also be issued herein to the same tenor and effect as is prayed in respect of said perpetual injunction.

Fifth. That a writ of subpoena ad respondendum be issued out of and under the seal of the Court directed to the said defendant, Chain Belt Company, requiring it at a certain time and under a certain penalty therein stated to be and appear before this Honorable Court, there to maintain and abide by such order and decree as may be agreeable to equity and as your Honors shall see fit to make in the premises.

And your orator will ever pray &c.

NEW YORK SCAFFOLDING COMPANY,
By WILLIAM E. CORNE, *President*.

C. P. GOEPEL,
Of Counsel.

290 Broadway, New York, N. Y.

STATE OF NEW YORK,
County of New York, ss:

William E. Corne, being duly sworn, deposes and says:

That he is the President of the New York Scaffolding Company, plaintiff herein.

That he has read the above complaint and knows the contents thereof, and that the same are true of his own knowledge save as to those matters therein stated to be alleged on information and belief, and as to those matters he believes them to be true.

WILLIAM E. CORNE.

Sworn to and subscribed before me, this 16th day of August, 1915,

[SEAL.]

D. LEWIS MATTERN,

Notary Public, New York County.

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Exhibit 4 to Bill of Complaint.

EXHIBIT 4.

Opinion.

SANBORN, *Circuit Judge*, delivered the opinion of the Court:

The New York Scaffolding Company, the owner of Letters Patent No. 959,008 for an improved scaffolding supporting means issued May 24, 1910, to E. H. Henderson, on an application filed June 19, 1909, brought a suit against Egbert Whitney for contributory infringement of claims 1 and 3 of its patent by the manufacture and sale of the hoisting device and the frame thereof described in the patent to Whitney issued July 18, 1911, on an application filed January 28, 1911. There was a decree for the defendant in the court below which this appeal challenges. The defenses were, first, invalidity of Henderson's patent on account of (a) anticipation, (b) lack of invention, (c) aggregation rather than patentable combination, and second, non-infringement.

Several patents were introduced in evidence to prove anticipation, but it is unnecessary to consider more than two, the Patent No. 382,252 to Bowyer and Casperson for an improvement in painter's stages issued May 1, 1888, and the patent to William J. Murray for an improvement in adjustable scaffolds issued May 28, 1907, for if neither of these anticipates there is none that does. The desideratum sought by Henderson was a simple, economical and efficient hoisting device and the frame therefor to enable workmen constructing large buildings to raise and lower the scaffolds on which they were working from their stations thereon, so constructed and combined with the cross pieces and floor pieces of the scaffold that the hoisting device and frame would not obstruct any portion of the platform of the scaffold, and that the combination of the hoisting device and its frame with the cross pieces and the floor pieces should be detachable without removing rivets or fastening of cross pieces to the frame, or of the floor pieces to the cross pieces, to the end that the combination could be easily and quickly knocked down, removed and set up again in another place. The principle and the method of combining the mechanical elements by which he reached the result he sought was to locate a hoisting frame, carrying a drum and a shaft gearing therewith operated by a detachable crank, broadside to the

9 wall of the building, at the end of each cross piece so that
neither the frame nor its hoisting device, nor the crank, would
obstruct any portion of the scaffold when the crank was not in use,
to support the cross pieces bearing the floor pieces on the lower ends
of the frames without fastening them thereto so that they could be
removed and replaced without removing or replacing rivets or fast-
enings. The means he devised to effectuate the principle of his
combination were these: To a drum, borne by the sides of the frame
of each hoisting device a cable, depending from the overhanging
portion of an outrigger fastened on the top, or on some other high
portion of the building, was attached. The frame of the hoisting
device was preferably formed by bending a piece of bar iron into the
form of the letter "U," the lower end of which passed around and
supported one end of a cross piece without being fastened thereto.
Supported in and extending between the upwardly extended ends
of the frame he placed a round bar which formed the support of
the drum to which the cable was fastened. On one end of the drum
was a gear wheel which meshed with a pinion revolvably supported in
and between the upwardly extended arms of the frame. This shaft
was squared at its ends so that the crank could be placed on either
end without fastening it there and could be used to drive the pinion
and the drum and to raise or lower the scaffold and then could be
removed without removing any fastening in order to avoid any ob-
struction thereby of the platform of the scaffold. The upper ends
of the frame were securely held in place by means of a bolt which
extended through and between them. One of these frames with its
hoisting device was placed at each end of each cross piece and thus
at least four of them were necessary to support and operate a scaffold,
and as many more could be used as the size of the building and the
extent of the work demanded. The claims in suit are:

"1. A scaffold consisting in the combination of cross beams, floor
pieces extending between such beams, and a hoisting device asso-
ciated with each end of each beam, each hoisting device consisting
of a continuous U-shaped metal bar extending around the under side
of and upward from the associated beam and a hoisting drum rota-
tably supported by the side members of such bar.

10 "3. A scaffold consisting of a plurality of U-shaped bars arranged
in pairs, a cross beam laid in and extending between each
pair of such U-shaped bars, a floor laid upon said cross beam,
a drum rotatably supported between the upwardly extending
side members of each of said U-shaped bars, and means for control-
ling the rotation of said drum."

The device patented to Bowyer and Casperson is a painter's stage,
consisting of the combination of a plank, each end of which is sup-
ported by a bar secured to the lower ends of the vertical sides of a
frame which carries a drum and a shaft operated by a crank and
bearing a pinion meshing with gearing on the drum to which a cable
or rope, depending through pulleys and other familiar devices from
a hook on the top of the cornice of a building, is attached. By the
use of two of these frames and the hoisting devices, painters, by turn-

ing the cranks, could operate the drums and raise or lower their staging and themselves.

The patent to Murray discloses an inverted U-shaped frame bearing in and between its vertical sides a drum, to which a depending cable is attached, and a gear wheel on the drum with which a pinion on a shaft, operated by a crank and supported in and between the vertical sides of the frame, meshes. By turning the crank the frame and hoisting device may be raised and lowered. This patent portrays a pair of these frames and hoisting devices one at each end of each cross piece which supports the floor pieces of the scaffold. These frames, however, are not placed with their broad sides, but with their narrow edge to the wall of the building so that the cross pieces used with these devices must necessarily be as much longer than those required for the use with Henderson's combination as twice the breadth of the frames is greater than twice their thickness, or the frames must be placed over and will obstruct the platform of the scaffold. In the combination of Murray the ends of the cross pieces do not rest unfastened upon the lower bends or bars of the hoisting frames, but they are rigidly secured by rivets or like fastenings to the lower ends of the vertical sides of the frame which supports them so that, in order to move the scaffold and to use it in another locality it is necessary to remove the rivets or fastenings and then rivet or fasten the cross pieces and frames together again, or to remove a cross beam with the two hoisting devices and their frames fastened thereto in one cumbersome mass.

Do the combinations of Bowyer and Casperson, and do Murray, anticipate and annul the patent of the combinations of Claims 11 1 and 3 of Henderson's patent? His patent is for a combination. It is not for a new machine, or for new mechanical elements, but for a new way of combining old mechanical elements. And a new combination of old mechanical elements whereby an old result is attained in a more facile, economical and efficient way or whereby a new and useful result is secured, may be protected by a patent as securely as a new machine or composition of matter, *Gould v. Rees*, 15 Wall. 187, 189; *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 443; *Leeds and Catlin Co. v. Victor Talking Mach. Co.*, 213 U. S. 301, 318; *Thompson v. Citizens Nat. Bank*, 53 Fed. 250, 3 C. C. A., 518; *National Hollow Brake Beam Co. v. Interchangeable Brake Beam Co.*, 106 Fed. 693, 707, 45 C. C. A. 544, 558; *Idé v. Trorlicht, Duncker & Renard Carpet Co.*, 115 Fed. 137, 141 53 C. C. A. 341, 345; *Kinloch Telephone Co. v. Western Electric Co.*, 113 Fed. 659, 665, 51 C. C. A. 369, 375; *Anderson v. Collins*, 122 Fed. 451, 459, 58 C. C. A. 669, 677. Henderson's method of combination made the use of scaffolds in the construction of large buildings easier, more economical and more efficient than those of prior methods, in that it avoided obstruction of the scaffolds by the hoisting devices, their frames or their cranks, shortened the cross pieces necessary to support the floor pieces of the scaffolds by the difference between twice the breadth and twice the thickness of the hoisting devices and their frames, and in that it enables the workmen to knock down, move and again set up the scaffolds, hoisting

devices and frames without unfastening and again riveting together cross pieces and hoisting frames or handling in one cumbersome whole a cross piece riveted to two frames bearing their hoisting devices. It is frequently necessary in the construction of buildings to take down and move the scaffolds of the workmen from place to place and Henderson's new combinations, now that they have been made, present distinct and obvious advantages over those of Bowyer and Casperson, and Murray in simplicity, economy and efficiency. They were neither disclosed nor suggested by Bowyer and Casperson, or by Murray, and neither their patents nor any other patents in the prior art anticipated them.

Did the new combinations of Henderson have such novelty and utility as to make them patentable? Their utility is established by the testimony of witnesses and by the fact that Whitney himself,

12 after the patent to Henderson had been allowed, made an application for a patent upon them which was rejected upon Henderson's patent, and Whitney has since, by the construction of his hoisting device and his frame attempted to appropriate to himself the principle and mode of operation and their advantages which were secured to Henderson by his patent of the combinations. *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 440.

Did the combinations of Henderson have the attribute of patentable novelty? They disclose simple and useful improvements. Their simplicity, however, is no bar to their patentability. "The fact that the invention seems simple after it is made," says the Supreme Court, "does not determine the question; if this were the rule many of the most beneficial patents would be stricken down. It may be safely said that if those skilled in the mechanical arts are working in a given field and have failed after repeated efforts to discover a certain new and useful improvement, that he who makes the discovery has done more than make the obvious improvement which would suggest itself to a mechanic skilled in the art, and is entitled to protection as an inventor." *Expanded Metal Co. v. Bradford*, 214 U. S. 366, 381; *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 434, 435. The quotation states the case which the history of the prior art disclosed by the record in hand presents. Moreover, the combination of Henderson "possesses such an amount of change from the prior art as to have received the approval of the Patent Office and is entitled to the presumption of invention which attaches to a patent." *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 434, 441. The attempt of the defendant below to patent to himself the combinations of Henderson after the latter had secured them, and the defendant's imitation of them in the devices he now makes and sells, substantially adds his testimony to the other proof of their patentability. The remarks of the Supreme Court in *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 440, are not inapplicable here, "It is conceded," said that Court, "as we have said, that his invention is a narrow one—a step beyond the prior art—built upon it, it may be, and only an improvement upon it. Its legal evasion may be the easier (*Railway Company v. Sayles*, *supra*), and hence we see the strength of the concession to its advance beyond the

prior art, and of its novelty and utility by the Rubber Company's imitation of it." The devices of Bowyer and Caspersen, of
 13 Murray and of the prior art were and are open to the defendant below. If there was no improvement in the combinations of Henderson, if the combination of Murray, or of any other patentee, was in effect the same as and equally useful with Henderson's why did not the defendant claim and use it? The record discloses the fact that during many years mechanics and inventors had been using their skill and their genius to discover and to construct the most simple, inexpensive and efficient combinations of hoisting devices, frames therefor, cross pieces and floor pieces for the scaffolds of workmen, that the advance in the art had been made step by step and that many inventors and mechanics had contributed different combinations whereby scaffolds could be made, raised, lowered and used with different degrees of success. This case, therefore, ranges itself under the familiar rule that where the advance toward the thing desired is gradual and several inventors form different combinations which accomplish the result sought with varying degrees of operative success, each is entitled to his own combination as long as it differs from those of his competitors and does not include theirs. *Ottumwa Box Car Loader Co. v. Christy Box Car Loader Co.*, 215 Fed. 362, 369; 131 C. C. A. 504; *Railway Co. v. Sayles*, 97 U. S. 554, 556; *McCormick v. Talcott, et al.*, 20 How. 402, 405; *Stirratt v. Excelsior Mfg. Co.*, 61 Fed. 980, 981, 10 C. C. A. 216, 217; *Griswold v. Harker*, 62 Fed. 389, 391, 10 C. C. A. 435, 437; *Adams Electric Ry. Co. v. Lindell Ry. Co.*, 77 Fed. 432, 440, 23 C. C. A. 223, 231; *National Hollow Brake Beam Co. v. Interchangeable Brake Beam Co.*, 106 Fed. 693, 712, 45 C. C. A. 544, 563.

The facts, considerations and rules of law to which reference has now been made have forced our minds to the conclusions that the combinations of Claims 1 and 3 of Henderson's patent were novel and useful, that their conception and application to the actual use of raising, lowering and moving workmen's scaffolds rose to the dignity of invention and endowed them with the attribute of patentability.

Before reaching this conclusion the argument of counsel for the defendant that these combinations were not patentable because they were mere aggregations of old elements, and the leading authorities upon that subject, received attention and meditation. The rule is now well established by sound reasons, and the great weight of modern authority, that it is not requisite to the patentability of a
 14 combination of old mechanical elements that each element should in addition to performing its own function, modify the function performed by one or more of the other elements of the combination. It is sufficient if the combination of the old elements is new and if the combined elements are capable of producing a novel and useful result, or an old result in a more facile, economical or efficient way. *National Cash Register Co. v. American Cash Register Co.*, 53 Fed., 367, 371, 3 C. C. A. 559, 563; *Pelton Water Wheel Co. v. Doble*, 190 Fed., 760, 766, 111 C. C. A. 488, 494, *International Mausoleum Co. v. Sievert*, 213 Fed. 225, 229, — C. C. A. —; *Ottumwa*

Box Car Loader Co. v. Christy Box Car Loader Co., 215 Fed., 263, 274, 131 C. C. A. 504; Sanders v. Hancock, 128 Fed. 424, 434, 63 C. C. A. 166, 176; Dayton Malleable Iron Co. v. Forster Waterbury & Co., 153 Fed., 201, 204; W. W. Sly Mfg. Co. v. Russell & Co., 189 Fed. 61, 66, 110 C. C. A. 625, 630; Burdett-Rountree Mfg. Co. v. Standard Plunger Elevator Co., 196 Fed. 43, 46.

A new combination of old elements in which, by a different location of one or more of the elements, a new and useful result is attained, or an old result is produced in a better way, is patentable. Sanders v. Hancock, 128 Fed., 424, 434, 63 C. C. A. 166, 176; Star Brass Works v. General Electric Co., 111 Fed. 398; Dowagiac Mfg. Co. v. Superior Drill Co., 115 Fed. 886, 53 C. C. A. 36; Stillwell-Bierce & Smith-Vaile Co. v. Eufaula Cotton Oil Co., 117 Fed., 410, 54 C. C. A. 584. The combinations of Henderson's first and third claims were new. No one had made them before he disclosed them. They were not described or suggested in the prior art. They placed the old elements, hoisting device and frame therefor in a new location broadside to the wall, a location wherein the connections between the lower parts of the frame were fitted to receive and so that they did receive and safely support, without fastening the ends of the cross pieces sustaining the floor pieces of the scaffold, and by the new relation and the co-action of the old elements in these new combinations a more facile, economical and efficient way to make, operate and move scaffolds for workmen, in a way in which hoisting devices and frames could be used without obstructing the platforms of the scaffolds while work on them was in progress, a way in which hoisting devices, frames therefor and cross pieces could be combined

to support, raise and lower a scaffold without riveting or
 15 securing cross pieces to frames and so that the hoisting and supporting apparatus could be knocked down, removed and set up without unfastening or refastening cross pieces to hoisting frames. These new and beneficial results were the effects, not of the separate performances by each of the old elements of its own function, but of the new relation and the new method of combination of the old mechanical elements and of their co-operation in that relation in the combinations of Henderson. Those combinations, therefore, fall well within the line of patentability established by reason and authority.

Did the defendant infringe these combinations of Henderson? It is not claimed that he made, sold or used the entire combination of either of the claims in suit, but that by the manufacture and sale of his hoisting devices and his frames therefor he is guilty of contributory infringement. Contributory infringement *in* the intentional aiding of one person by another in the unlawful making or selling, or using of a third person's patented invention. Henry v. Dick, 224 U. S. 1, 32, 33, 34. "One who makes and sells one or more elements of a patented combination, with the intention and for the purpose of bringing about its or their use in an infringing combination, is guilty of contributory infringement and is equally liable with him who in fact organized and uses the complete combination." James Heekin Co. v. Baker, 138 Fed. 63, 66, 70; C. C. A. 559, 562.

One who makes and sells articles which are only adapted to be used in a patented combination will be presumed to intend the natural consequences of his acts, he will be presumed to intend that they shall be used in the combination of the patent. It is the duty of one who is offering for sale one or more articles which he intends shall be used in combinations which, if unlicensed, will infringe a patent to see to it that such combination which he thus promotes and induces are lawfully organized. Thomson-Houston Electric Co., v. Ohio Brass Co., 80 Fed., 712, 821, 26 C. C. A. 107, 116. The foregoing rules of law are indisputable. They are supported by a multitude of authorities, among others by American Graphophone Co. v. Hawthorne, 92 Fed., 516, 517; Thomson-Houston Electric Co. v. Kelsey Electric Ry. Etc. Co., 75 Fed., 1005, 1007, 1008, 22 C. C. A. 1, 3, 4; Heaton-Peninsular Button Fastener Co. v. Eureka Specialty Co., 77 Fed. 288, 297, 25 C. C. A. 267, 276; Johnson v. Foos Mfg. Co., 141 Fed., 73, 88, 72 C. C. A. 105, 120; Leeds and Catlin Co. v. Victor Talking Machine Co., 154 Fed. 58, 59, 83 C. C. A. 170, 171.

The distinguishing characteristic of Henderson's combination, the new location and method of combining the elements which secured the advantages of these combinations, was the location of the hoisting device and its frame broadside to the wall and the provision of substantial connections between the lower ends of the vertical side pieces of his hoisting frames upon which the ends of the cross pieces could rest without fastenings. This was the principle of his new combinations of hoisting devices and their frames with the cross pieces and floor pieces of the scaffolds. The defendant Whitney has embodied this principle in hoisting devices and their frames which are adapted to be used in Henderson's combination, and these he is manufacturing and selling. His counsel argue that a combination of these hoisting devices and their frames with the cross pieces and floor pieces of scaffolds would not infringe the combinations of Henderson because Henderson's drum is supported by a shaft whose ends extend through perforations in the vertical side pieces of his frames, while Whitney's drum is mounted on brackets secured to the vertical side pieces of his frames, because Henderson's frames for his hoisting devices are metal bars bent in the form of the letter "U," while Whitney uses metal bars bent in the form of inverted letters "U," and because Henderson uses a shaft operated by a crank to drive his drum, while Whitney uses a lever. But a crank on a shaft is a lever. Whitney has headed and thereby fastened into loops in the lower ends of the vertical sides of each of his inverted U hoisting frames a supporting rod of metal connecting the vertical sides of his frames, and with these rods he supports the cross pieces of the scaffold without fastening the latter to the frames just as the lower parts of Henderson's frames in the form of upright letters U support such cross pieces. A drum mounted on brackets fastened to the vertical sides of one of these hoisting frames is in mechanical effect the same thing as a drum mounted on a shaft whose ends extend through perforations in such vertical sides. These changes from the combinations of

Henderson which Whitney has made are but the substitution of plain mechanical equivalents and they have no tendency to relieve the combination of his hoisting devices and frames with the cross pieces and floor pieces of a scaffold of infringement of Henderson's patented combinations. Whitney's hoisting devices and

17 frames still remain the mechanical equivalents of those of Henderson. In combination with the cross pieces and floor pieces of a scaffold they embody the new principle and method of Henderson. By their necessary location in their use by workmen constructing large buildings with their broad sides to the wall (and they could not be used for such scaffolds with their edges to the wall because thus placed they would furnish no support for the cross pieces), they prevent obstruction of the platforms while the employees are at work and furnish secure supports for the cross pieces without fastening the latter to the frames so that the scaffolds can be knocked down, removed and set up again without removing or replacing such fastenings. By the use of the new principle and way of combining the old elements which Henderson disclosed they accomplish, in combination with the cross pieces and floor pieces of a scaffold, by the same mechanical means the same beneficial results which the hoisting devices and frames of Henderson attained in his patented combinations, and they fail to escape infringement thereof.

The combinations of Henderson are unique in this, that the principle of his invention is embodied in the hoisting devices and their frames and their appropriate location in the combinations to such an extent that any contractor or other person provided with them and taught their proper location can readily supply the cross pieces and floor pieces and make and use the patented combinations. It is the hoisting devices and their frames that the defendant Whitney makes and sells. The expert introduced on his behalf testified that the Whitney machine was the same as that disclosed in the Whitney patent in all essential respects. Whitney himself testified that he had disseminated a circular which contained a cut of his hoisting device and frame during the year 1912, that he had seen his hoisting devices and frames in use and shown contractors the manner of their installation and operation and that he was ready to supply them. At least two pairs of hoisting devices and their frames all placed broadside to the wall of the building, each pair supporting a cross piece, are indispensable to the combinations of Henderson to construct scaffolds for workmen on large buildings. Figure 1 of the patent to Whitney discloses four of his hoisting devices and their frames so located com-

18 bined with cross pieces and floor pieces in the new way disclosed by the patented combinations of Henderson. Whitney testified that his hoisting devices and their frames were adapted to be used in that manner and that they were equally adapted to be used by laying a plank across from one machine to another. But their use by laying a plank from one machine to another would be futile and impractical in the construction of large buildings because the platform would be too narrow and the hoisting units would necessarily hang across the plank with their edges to the wall and

would obstruct the passage of the workmen beyond the plank. The facts that in this later patent Whitney portrayed in his Figure 1 his hoisting devices and their frames in use in the combinations of Claims 1 and 3 of Henderson's patent, that they were adapted to use in those combinations, that he had advertised them, had explained to contractors the manner of their installation and operation, had seen them in operation, and that he is here opposing an injunction against his manufacture and sale of them for use in those combinations where it is his duty to see to it that they are not used, *Thompson-Houston Electric Co. v. Ohio Brass Co.*, 80 Fed. 712, 721, 26 C. C. A. 107, 116, leaves no doubt that he is making and selling his hoisting devices and frames with the knowledge that they are being used and the intention that they shall be used unlawfully in the combinations of Claims 1 and 3 of Henderson's patent, and that he is guilty of contributory infringement.

The application of Henderson for his patent was twice rejected by the examiner before the patent was issued, and counsel for Mr. Whitney have earnestly contended that by these rejections and Henderson's amendments of his claims he was estopped from insisting that any combination of the mechanical elements he describes in which the lower end of the frame of the hoisting device *is* not integral with the sides of the frame constitutes an infringement of his claims, and that, because the lower end of Whitney's frame consists of a rod which is not integral with its sides although its ends are fitted and headed into metal loops formed by bending up and fastening the lower ends of the side pieces of his frames he escapes infringement. This argument has been attentively considered, but it has failed to convince. The specification of Henderson's patent aside from the claims therein, is identical with that specification as it was first presented with his application. He first presented eight claims. They were all rejected by the examiner who cited *Murray*, No. 19 854,959, May 28, 1907, and several other patents not now material, and wrote "None of the claims are seen to present invention over *Murray*. To arrange his U shaped frame with the closed end down so as to extend around the cross bar would be obvious if desired." Henderson amended his Claim 1 by inserting the words "the under side of," where they now appear in Claim 1 of the patent, and added what is now Claim 3 of the patent. The examiner again rejected all the claims with the remark that the claims presented no invention over *Murray* in view of *Bowyer, et al.*, No. 382,252, May 1, 1888. Henderson did not acquiesce in this rejection but inserted the word "continuous" where it now appears in Claim 1 of his patent and again pressed his application. His solicitors argued, among other things that "none of the structures of the prior art are adapted to support the scaffold without either positively securing the windlass frame to the scaffold or using a complicated structure for the windlass frame." Their argument prevailed, the examiner held that the combinations Henderson claimed were not anticipated by *Murray*, or by *Bowyer* and *Casperson*, or by anything in the prior art, that they were novel and useful and that they exhibited invention, and he caused the patent to issue. The rule of law which governs the questions here

at issue is this: While a patentee who acquiesces in the rejection of his claim and abandons it on references cited in the patent office, and accepts a patent on an amended claim, is hereby estopped from maintaining that the latter claim covers the combination shown in the references, and that it has the breadth of the abandoned claim that was rejected, that is the limit of the estoppel. One who does not abandon, but insists upon and sustains his first claim is not estopped, and one who acquiesces in the rejection of his claim because it is said to be anticipated by other patents or references is not thereby estopped from claiming and securing by an amended claim every novel and useful improvement that is not described in those references. *National Hollows Brake Beam Co. v. Interchangeable Brake Beam Co.*, 106 Fed. 693, 714, 45 C. C. A. 544, 565; *J. L. Owens Co. v. Twin City Separator Co.*, 168 Fed. 259, 268, 93 C. C. A. 561, 570; *O'Brien-Worthen Co. v. Stempel*, 209 Fed. 847, 851, 128 C. C. A. 53; *Ottumwa Box Car Loader Co. v. Christy Box Car Loader Co.*, 215 Fed. 362, 373, 131 C. C. A. 504. Henderson is not estopped by the record which has been recited from claiming that combinations which

20 embody the principle of those claimed in one and three of this patent, that is to say, the location of the hoisting devices and their frames broadsides to the wall and the support of the cross pieces without fastenings on the bar which connects the lower ends of the side pieces of the frames because he never abandoned his claims of those combinations. Claims 1 and 3 are in the same words in which they were when they were first presented to the examiner, except that the words "the under side of" and "continuous" were subsequently inserted in Claim 1. But the insertion of these words did not change the meaning or effect of the original claims. The subsequent presentation and allowance of these claims was an insistence upon and not an abandonment of them by Henderson and their allowance by the examiner was the reversal of his earlier decision rejecting them. Even if it were conceded that the insertion of the word "continuous" indicated that Henderson's U shaped frame was to be integral, nevertheless, the claim of its integral character could have had no legal effect. One may not escape anticipation or infringement by making an article in one piece which then performs the same function in the same way that an earlier article of the same kind in two pieces performed, and the examiner could not have decided, and clearly did not decide, that the combinations of Henderson were patentable because the U shaped frame was integral. He held that they were patentable because they disclosed Henderson's New Method of Combining Hoisting Devices and the frames therefor broadsides to the wall with the cross pieces and floor pieces of the scaffold so that the hoisting units should not obstruct the platform of the scaffold, and the cross pieces should be supported on the rod which connected the lower ends of the vertical sides of the frames. This principle and the combinations which embody it were not disclosed or suggested in the prior art nor in the references on which the examiner at first rejected Henderson's claim. His claim to the combinations of 1 and 3 of his patent Henderson never abandoned, never acquiesced in the rejection of but pressed and reiterated until they were patented, and neither

he nor his grantees are estopped from insisting upon their protection against infringement.

Let the decree below be reversed and let a decree for an accounting and for an injunction against the manufacture, and sale by the defendant, Whitney, or his agents, of his hoisting device and
21 hoisting frame for use or sale in the combination of Claim 1 or of Claim 3 of Henderson's Patent, or for any other purpose than use in a scaffold made by laying a plank or planks on the lower bars of two of his hoisting frames placed with their edges to the wall of the building, be granted.

Filed May 12, 1915.

Answer of Chain Belt Co.

Filed Sept. 11, 1915.

Sep. 11, 1915. Answer of Chain Belt Company, filed as follows:

Answer.

Defendant, Chain Belt Company, files this its answer to the bill of complaint herein and says:

1. That it is not advised, except by said bill of complaint, that the New York Scaffolding Company is a corporation created and existing under and in accordance with the laws of New York having its principal place of business in the City of New York in said State.

2. As to whether or not defendant is a corporation organized and existing under the laws of the State of Wisconsin, and an inhabitant of, and having a regular and established place of business in the City of Milwaukee in the State of Wisconsin, defendant leaves plaintiff to make such proof thereof as it shall deem necessary, but defendant denies that it has within the Eastern District of Wisconsin, or elsewhere in the United States, committed acts of infringement as complained of in the bill of complaint herein or otherwise.

3. Defendant denies that plaintiff is without an adequate remedy at law.

4. Defendant denies that Elias H. Henderson was the true, original, first and sole inventor and discoverer of certain alleged improvements in Scaffold Supporting Means described in alleged letters patent No. 959,008 and denies that said alleged improvements had not been used by or known to others in this country prior to said Henderson's alleged invention thereof and denies that said alleged improvements had not been patented or described in any printed publication prior to said Henderson's alleged invention thereof in the United States or any foreign country, for more than two years prior to his application for letters patent of the United States and defendant denies that same had not been patented in any

country foreign to the United States on an application filed more than twelve months before Henderson's said application and denies that same was not in public use or on sale in

the United States for more than two years prior to Henderson's said application and denies that same had not been abandoned.

5. Defendant is not informed with reference to the application for said alleged letters patent No. 959,008, and leaves plaintiff to make such proof thereof as it may be advised is necessary or material.

6. As to whether or not there was on the 24th day of May, 1910, duly issued to Elias H. Henderson, letters patent of the United States No. 959,008, defendant is not advised except by the bill of complaint and therefore demands strict proof as to those matters; but defendant denies that if said letters patent were issued to said Henderson as alleged in the bill of complaint, there was vested in him, his heirs or assigns, for the term of seventeen years thereafter, for any term, the exclusive or any right to make, use and vend said alleged invention throughout the United States and the territories thereof, and denies that such letters patent if ever issued, are still in force.

7. As to the matters alleged in paragraph third of said bill of complaint, defendant is not sufficiently advised to make answer and therefore demands strict proof of all those matters, but defendant denies, upon information and belief, that the New York Scaffolding Company, plaintiff herein, is now the sole owner and holder of said letters patent and of all the rights and privileges thereby conferred or intended so to be; denies that it has any right to recovery for damages and profits for past infringement or that it has possession of any title or rights to or under said patent or that it has such title as will support this bill of complaint.

8. Defendant is not informed with reference to the business of plaintiff or the manner of conducting the same as alleged and set forth in paragraph fourth in said bill of complaint, and leaves plaintiff to make such proof thereof as it may deem necessary or material, but defendant denies that any rights of plaintiff in and to the pretended letters patent and the alleged inventions therein set forth, have been generally or otherwise recognized or acquiesced in by the public or that there has been any recognition or acquiescence therein by that portion of the public which makes use in its business of scaffolds for buildings of the general character of those described and claimed in said Henderson patent; defendant denies that large or any numbers of builders or contractors in different parts of the United States have recognized any alleged rights of plaintiff or prior owners of said patent in the alleged invention by leasing scaffolds embodying the alleged inventions or paying therefor any royalty or price, or that such practice is existing or being followed at the present time by many or any builders or contractors throughout the country; defendant further denies that plaintiff's use of the alleged invention has been or is profitable to it; denies that plaintiff ever used said invention or that

it would realize further large or any sums under any conditions because of said alleged inventions, and denies that plaintiff has been prevented on account of any acts of defendant from enjoying the sole and exclusive right in and to the Henderson patent and invention therein claimed to be covered.

9. Defendant denies all of the matters and things set forth and charged in paragraph fifth of the bill of complaint; denies that it ever made or used any scaffold supporting means of the kind set forth in said alleged letters patent No. 959,008, or covered by any of the claims thereof; denies that any act of infringement of plaintiff's patent within the Eastern District of Wisconsin, or elsewhere; denies that it has ever realized or received, or that it is still receiving, large or any gains or profits because of any infringement of any rights of plaintiff; denies that plaintiff has expended large or any sums of money in building up a business under said Henderson patent; denies that plaintiff will be irreparably or in any wise damaged on account of any acts of defendant; defendant denies that it ever made any profit whatsoever from the use or the employment of any scaffold supporting means set forth in said alleged letters patent No. 959,008, and denies that it has ever, in any way, infringed or violated any rights of plaintiff in, to or under said alleged patent or otherwise, and denies that plaintiff has any right to an accounting as prayed for in the bill of complaint, or to any recovery from or against this defendant for any reason or purpose whatsoever.

10. Defendant specifically denies the charge contained in paragraph sixth of the bill of complaint.

11. Defendant denies the matters and things stated in paragraph seventh of the bill of complaint in manner and form as there stated and alleges that in the suit brought against Egbert Whitney of Omaha, Nebraska, on the aforesaid letters patent No. 959,008, after full proofs were taken and argument had, a decree was entered by his Honor, Judge Morris, of the United States District Court for the District of Nebraska, a copy of which decree is attached hereto marked "Exhibit No. 1" and made a part hereof. Defendant states that thereafter an appeal was taken by the New York Scaffolding Company to the United States Circuit Court of Appeals for the Eighth Circuit; that in that court, an opinion was rendered by his Honor, Circuit Judge Sanborn, concurred in by his Honor, Judge Treiber, as stated by plaintiff in paragraph seventh of its bill of complaint herein, but defendant further shows that in that court, a dissenting opinion was rendered by his Honor, Circuit Judge Smith, a copy of which is attached hereto and marked "Exhibit 2" and made a part hereof. Defendant further states that it is informed and believes that in said case, a petition to the United States Supreme Court asking for a writ of certiorari is about to be presented; that so far as defendant is advised, the mandate in said case has not been handed down and said cause has not been finally and fully determined.

12. Defendant charges that the said alleged letters patent No.

959,008 and each and every part thereof are void and of no effect in law because the alleged invention alleged to be therein described and claimed, had been long prior to the supposed invention or discovery thereof by the said Henderson, described and fully disclosed to the public and patented in various patents of the United States and foreign countries, and described in printed publications prior to any alleged invention thereof by the said Henderson and more than two years prior to his application for said letters patent; that said Henderson was not the original and first inventor or discoverer thereof or of any material or substantial part of the thing claimed to be patented; that the structure and things claimed to be patented had been in public use and on sale in this country for more than two years before his application for a patent thereof and each and every part had been invented and discovered by parties named in the hereinafter mentioned patents and the said alleged invention had been abandoned to the public. The following patents, names of parties mentioned in said patents, printed publications and users, are among those supporting these defenses and to which defendant makes reference, to wit:

25 No. 382,252 granted May 1, 1888 to Charles D. Bowyer and William H. Caspersen, of Camden, New Jersey for Painter's Stage.

No. 382,901 granted May 15, 1888 to Charles W. Randall, James H. Smith and S. F. Emley, of Jersey City, New Jersey for Scaffold for Wooden Buildings.

No. 607,805 granted July 19, 1898 to Johann Sladek and George Ladewich, of New York, New York for Scaffold.

No. 673,384 granted May 7, 1901 to Charles J. Clark, of New York, New York, for Mason's Platform for Buildings.

No. 763,275 granted June 21, 1904, to Clair Foster, of Douglass, New York for Scaffold.

No. 763,884 granted June 28, 1904 to Louis H. Harpin, and Theophile H. Harpin, of Kankakee, Illinois, for Scaffold.

No. 769,395 granted Sept. 6, 1904 to William J. Murray, of New York, New York, for Scaffold-Support.

No. 775,704 granted Nov. 22, 1904, to Orlando B. Howe of La-
mark, Illinois, for Fire Escape.

No. 785,289 granted March 21, 1905, to Thomas J. Campbell, of San Francisco, California, for Outside Hanging Scaffold.

No. 792,341 granted June 13, 1905 to William H. Morrow, of New York, New York, for Hanging Scaffold.

No. 796,807 granted Aug. 8, 1905, to Michael Cavanagh, of New York, New York, for Scaffold-Support.

No. 797,722 granted Aug. 22, 1905 to Henry B. Crandall, John L. McManus and James D. MacPherson, of Lynn, Massachusetts for Hoist Chair.

No. 841,932 granted January 22, 1907, to Denison P. Chesbro, of New York, New York for Scaffold.

No. 842,382 granted Jan. 29, 1907 to Charles J. Clark, of New York, New York, for Mason's Platform for Buildings.

No. 854,959 granted May 28, 1907 to William J. Murray, of New York, New York for Adjustable Scaffold.

No. 882,206 granted March 17, 1908 to William J. Murray, of New York, New York for Scaffold.

Defendant sets up and pleads the following letters patent of Great Britain as a complete anticipation of the alleged improvements set forth in said alleged letters patent No. 959,008, to-wit:

No. 9,518 dated May 5, 1896, to E. J. Palmer for Staging.

13. Defendant further states upon information and belief, that said Henderson is not the original or first inventor or discoverer of any material or substantial part of said alleged invention or discovery for the reason that the same and every material or substantial part thereof had been previously invented, used by and known to the parties in the afore-mentioned patents at the places of their respective residences as therein set forth and that such public use and sale had been for more than two years prior to the filing of the application for said alleged letters patent No. 959,008, and defendant states that there are numerous other patents, printed publications, names of users and persons having prior knowledge not now known to defendant, but which, when ascertained, it prays leave of court to set up in its answer by amendment.

14. Defendant denies that the plaintiff is entitled to any of the relief sought or prayed for in the bill of complaint herein and prays that the bill of complaint be dismissed at the cost of plaintiff.

CHAIN BELT COMPANY,

By WALLACE R. LANE,

Its Attorney.

WALLACE R. LANE

Solicitors and of Counsel for Defendant.

EXHIBIT No. 1.

This cause came on to be heard on the 17th day of December, 1913, Mr. C. P. Goepel appearing on behalf of the complainant, and Mr. Willard Eddy, appearing on behalf of the defendant.

Counsel for complainant withdrew its case as to the Murray patent in suit and stated that the only claims relied on were claims 1 and 3 in the patent #959,008, issued May 24th, 1910, for Scaffolding Supporting Means, to Elias H. Henderson; and thereupon, after hearing the testimony offered and received and the arguments of counsel, the Court took the case under advisement, and now, having duly considered the same, and being of the opinion that the said claims are void for want of invention, and that, if they were not entirely void, there would, under the very limited interpretation that must be given to them, be no infringement by any scaffolding which might be constructed with the defendant's device;

It Is Ordered, Adjudged And Decreed that the bill herein be and the same is hereby dismissed with costs, to be taxed.

By the Court,

(Signed)

PAGE MORRIS, *Judge.*

Dated February 21st, 1914.

EXHIBIT No. 2.

SMITH, *Circuit Judge*, dissenting:

Believing that the alleged patent of the appellant covers nothing but ordinary mechanical skill applied to the prior art I think the patent is void and this case should be affirmed. I therefore respectfully dissent from the foregoing opinion.

Filed May 12, 1915.

A true copy.

Attest:

(Sgd.)

[SEAL.]

JOHN D. JORDON,

Clerk U. S. Circuit Court of Appeals,

Eighth Circuit.

Interrogatories Propounded by Defendant.

Filed Sept. 11, 1915.

Sep. 11, 1915. Interrogatories propounded by defendant, filed as follows:

Interrogatories Propounded by Defendant.

Now comes the Chain Belt Company, defendant in the above-entitled cause, and propounds the following Interrogatories to the plaintiff so that it may answer any and all, that said defendant may have knowledge as to the facts inquired about.

1. When and where did plaintiff first construct a device of the kind set forth in the Henderson patent in suit?

2. What claims of said Henderson patent does plaintiff charge to have been infringed by defendant?

3. What particular device is charged to be an infringement of said Henderson patent? What is the name of the device charged to infringe? Attach a cut or photograph of the alleged infringing structure.

4. Is the Henderson patent in suit owned by the New York Scaffolding Company or the Patent Scaffolding Company? What is the relation between those two companies as to the Henderson patent?

5. Is the scaffolding construction made, sold or leased by plaintiff, made under the Henderson patent No. 959,008? If not, under what patent?

6. For how long a time has either the New York Scaffolding Company or the Patent Scaffolding Company marked Scaffolding machines as follows:

28 "Property of The Patent Scaffolding Co. of Illinois.

"Chicago, U. S. A.

"Machines rented. Not sold.

"Patent No. 854,959, May 28-1907."

State which company has so marked.

7. Produce a machine made under the Henderson patent No. 959,008.

8. Produce a machine made under the patent to Murray No. 854,959, and marked as described in Interrogatory No. 6.

(NOTE.)—In answer to each of the above Interrogatories it is desired from such officer of the plaintiff corporation as may have knowledge of the facts, or by any person or persons designated by the officers of the plaintiff corporation.

WALLACE R. LANE,
Counsel for Defendant.

WALLACE R. LANE,

Solicitors and of Counsel for Defendant.

Interrogatories Propounded by Plaintiff.

Filed Sept. 23, 1915.

Sep. 23, 1915. Interrogatories propounded by plaintiff, filed as follows:

Interrogatories Propounded by Plaintiff.

The plaintiff, New York Scaffolding Company, propounds the following interrogatories to the defendant under Equity Rule 58:

1. Is it not a fact that you made and sold machines to Egbert Whitney or the Eclipse Scaffolding Company, both of Omaha, Nebraska, before August 1st, 1915, these machines being scaffolding machines as shown in U. S. patent No. 998,270, dated July 18, 1911, and known as the "Eclipse" scaffolding machines?

2. Is it not a fact that before August 1st, 1915, you made and sold to the said Egbert Whitney or the said Eclipse Scaffolding Company, scaffolding machines known as the "Little Wonder" type, and made according to U. S. patent No. 1,114,832?

3. Is it not a fact that the said Egbert Whitney or the said Eclipse Scaffolding Company are paying the expenses and directing the defense herein, and indemnifying you against any loss that may arise from this suit?

29 4. State the exact relation which the said Egbert Whitney or the Eclipse Scaffolding Company have in this suit, and what share, if any, they have in paying for the expenses or directing the defense in this suit.

If any of the above interrogatories do not set forth the correct facts, please mention the correct facts.

NEW YORK SCAFFOLDING COMPANY,
By C. C. GOEPEL, *Solicitor*.
ALEXANDER & BURKE,
Local Solicitors.

Answer- to Defendant's Interrogatories.

Filed Sept. 30, 1915.

Sep. 30, 1915. Answers to defendant's interrogatories, filed as follows:

Answer- to Defendant's Interrogatories.

1. The plaintiff has never constructed the combination of U-frames and putlogs which constitute the Henderson scaffold-supporting means, and which constitute the device in issue. This has been and is done by users under license by the plaintiff, to which the elements of the Henderson combination above set forth have been and are shipped in a separated state. The devices have been and are made up by the user who assembles the U-frames and putlogs on the job. This licensing and use has been continuous since the Henderson patent was acquired by plaintiff, namely, on May 12th, 1911.

2. Claims 1 and 3 of the Henderson patent in suit are charged by the plaintiff to have been infringed by the defendant.

3. The plaintiff has no cut or photograph. The particular machine is known in the trade as the Whitney Scaffold Hoist Machine, and the other machine is known in the trade as the Little Wonder Machine, both being used in the combination of claims 1 and 3 of the Henderson patent in issue. Both the Whitney Scaffold Hoist Machine and the Little Wonder Machine have the putlogs or cross beams resting on rods or plates forming part of a U-shaped frame, on which frame the winding or hoisting mechanism is supported, and the planks forming the platform are arranged on the putlogs or cross beams.

4. The Henderson patent in suit is owned by the New York Scaffolding Company. The Patent Scaffolding Company of Illinois leases machines and scaffolds under this patent with the consent of and the license of the plaintiff. This question is regarded as improper under the rules, and is merely being answered to avoid needlessly consuming the time of the Court, without waiver of future right.

5. The plaintiff only licenses the use of such scaffolding construction under patent No. 959,008.

6. The plaintiff has never marked any machines as specified. It has no knowledge of the actions of the Patent Scaffolding Company, with respect to the said markings, as specified.

7. No; plaintiff will not produce the machine called for by inter-

rogatory 7, as it is believed such demand is not within the intent of the rules.

8. No; plaintiff will not produce the machine called for by interrogatory 8, as it is believed such demand is not within the intent of the rules.

NEW YORK SCAFFOLDING COMPANY,
By WILLIAM E. CORNE, *President*.

STATE OF NEW YORK,
County of New York, ss:

William E. Corne, being duly sworn, deposes and says: That he is the President of the plaintiff, and is familiar with its affairs and with those affairs set forth in the interrogatories propounded by the defendant. That he knows the answers above set forth, and that they are true of his own knowledge, save as to those statements therein stated to be alleged on information and belief, and as to those statements he believes them to be true.

WILLIAM E. CORNE.

Sworn to and subscribed before me, this 25th day of September, 1915.

[SEAL.]

D. LEWIS MATTERN,
Notary Public, New York County.

Notary Public Kings County No. 284. Registered in New York County No. 339. Term expires March 30th, 1917.

31

Motion.

Filed Oct. 16, 1915.

Oct. 16, 1915. Defendant's motion to strike and objections to interrogatories, filed as follows:

Motion to Strike and Objections to Interrogatories.

Comes now the defendant in the above-entitled cause and moves that the interrogatories propounded by plaintiff herein be stricken from the files for the following reasons, to-wit:

First. Because same are not directed to any officer of the defendant corporation.

Second. Because Rule 58 of the Rules of Practice for the Courts of Equity of the United States has not been complied with.

Third. Because the defendant being a private corporation, no order of court has been obtained allowing plaintiff to file interrogatories to be answered by an officer of the corporation.

Fourth. Because the first interrogatory, is not proper in that it calls for matters of evidence, and is not within the limits of Rule 58.

Fifth. Because the second interrogatory also calls for matters of evidence and is outside the scope of Rule 58.

Sixth. Because the third interrogatory is incompetent, immaterial and irrelevant and if answered would have no bearing upon any of the issues in this case.

Seventh. Because the fourth interrogatory is incompetent, immaterial and irrelevant and has no bearing upon any of the issues in this case.

Eighth. Objection is made to all of the interrogatories as filed as incompetent, immaterial and irrelevant and having no bearing on any of the issues in this case; as improperly filed under Rule 58; as not having contained a note at the foot stating which of the interrogatories are to be answered by certain parties and as not having specified what officer of the corporation is required to make answer.

Defendant asks that it be permitted an oral hearing on the above motion and objections and that the hearing of said motion and objections be set for a day certain so that defendant may be orally heard on its motion and objections.

(Sgd.)

WALLACE R. LANE,
Counsel for Defendant.

October 15, 1915.

32

Order of Jan. 18, 1916.

Jan. 18, 1916. Order relative to interrogatories, filed as follows:

Order.

The plaintiff herein having filed interrogatories under Rule 58, and the defendant having filed objections thereto, and the matter coming on for argument,

Now, then, after hearing C. P. Goepel for the plaintiff, and George Mankle for the defendant, it is hereby

Ordered that interrogatories 1 and 2 be reformed and then be answered by the defendant, and that interrogatories 3 and 4 be disallowed and need not be answered by defendant.

It is further ordered that the interrogatories hereto annexed may be filed nunc pro tunc as of the date of the filing of the interrogatories herewith passed upon, and that the defendant be required to make answer to said interrogatories within ten days of the entry of this order.

Enter.

(Signed)

FERDINAND A. GEIGER, *Judge.*

This order is without prejudice to the defendant's right to object to reformed interrogatories when filed.

(Signed)

F. A. GEIGER, *Judge.*

Order of Jan. 18, 1916.

Jan. 18, 1916. Order in re answer to certain interrogatories, filed as follows:

Order.

The defendant herein having filed interrogatories under Rule 58, and the plaintiff having objected to the answering of interrogatories 7 and 8, and the matter coming on for argument;

Now, then, after hearing C. P. Goepel for the plaintiff, and George Mankle for the defendant, it is hereby

Ordered that the plaintiff be not required to answer interrogatories 7 and 8, and that the said interrogatories be, and the same hereby are, disallowed.

(Signed)

FERDINAND A. GEIGER, *Judge.*

33 *Objections to Plaintiff's Revised Interrogatories.*

Filed Jan. 21, 1916.

Jan. 21, 1916. Objections to revised interrogatories propounded by plaintiff, filed as follows:

Objections to Revised Interrogatories Propounded by Plaintiff.

Comes now the defendant, Chain Belt Company, and objects to the revised interrogatories propounded by plaintiff for the following reasons, to-wit:

1. For that the time mentioned in interrogatory No. 1 is improper to be considered.

2. For that the matter inquired about in interrogatory No. 1 is purely a matter of evidence.

3. For that the matter inquired about in interrogatory No. 2 is purely a matter of evidence.

4. For that neither of the interrogatories *are* proper — form, or within the scope and terms of Equity Rule 58.

WALLACE R. LANE,
Counsel for Defendant.

Order of Mar. 24, 1916.

March 24, 1916. Rule to show cause, filed as follows:

Rule to Show Cause.

Egbert Whitney doing business under the firm name and style of The Eclipse Scaffolding Company having filed his petition herein asking that he be allowed to intervene herein and to become party defendant, and to file a motion for an injunction restraining the

bringing of further suits and distribution of warnings and the threatening of customers and asking for a rule to show cause why such injunction should not issue, together with affidavits in support thereof, and after due consideration had,

It is Ordered that plaintiff, the New York Scaffolding Co. be and appear in the court-room of this Court at Milwaukee, Wisconsin, at 10 o'clock in the forenoon on the 8th day of April, 1916, then and there to show cause, if any, why said Whitney should not be allowed to intervene and why his petition of intervention and the relief therein prayed for should not be filed and allowed and why injunction should not issue in this cause enjoining and restraining the plaintiff, its officers, agents, servants, employees and attorneys until the further order of this Court, or until the final determination of the suits now pending, from commencing any suits under any of its patents against any purchaser or user of or dealer in scaffolding machines and equipment obtained from or through Egbert Whitney or the Eclipse Scaffolding Co., and from prosecuting any of the suits now pending save this one and for other relief.

It is further ordered that a copy of this rule together with a copy of the proposed intervenor's petition, and the affidavits in support thereof, be served on plaintiff's solicitors; that plaintiff have until the 3rd day of April, 1916, in which to file and serve on intervenor's attorneys, such reply affidavits as it may deem advisable and that intervenor have until the return day of this rule in which to file affidavits in reply to such affidavits, if any, filed by plaintiff.

Done at Milwaukee, Wisconsin, this 24th day of March, 1916.

(Sgd.)

F. A. GEIGER,

United States District Judge.

Petition for Leave to Intervene.

Filed Mar. 24, 1916.

Mar. 24, 1916. Petition of Egbert Whitney for leave to intervene, filed as follows:

Petition of Intervention.

Comes now Egbert Whitney, doing business under the name and style of The Eclipse Scaffolding Co., with an office and place of business in Omaha, Nebraska, a citizen of the State of Nebraska and a resident of Omaha in said State, and respectfully asks leave of the court to intervene as a defendant in this case, and states therefor, the following reasons:

1. That the devices which the defendant is making and which the plaintiff is charging it with infringement in this suit, have been made by the direct order of your petitioner for use in connection with his business in supplying scaffolding machinery and equipment to contractors and builders throughout the United States.

2. That one of the devices which the plaintiff is attempting to include in its charge of infringement is a device which has neither been made, sold or used by the defendant, the Chain Belt Company or your petitioner, for approximately two years, but was formerly made by the Chain Belt Company exclusively for your petitioner, and the other of said devices is being purchased exclusively by your petitioner from the Chain Belt Company, and, hence, your petitioner has a vital interest in this controversy and will be largely affected by any decision had herein, particularly as the only manufacturer which is making these devices for your petitioner is the defendant, the Chain Belt Company.

3. Your petitioner is seriously affected by the bringing of this action and others of similar character, in that it is an attempt on the part of plaintiff to intimidate the defendant, the Chain Belt Company, and the public generally from the manufacture, sale or use of constructions which it has a perfectly legitimate right to use without any interference whatever on behalf of the plaintiff.

Wherefore, petitioner prays that an order immediately be entered permitting it to intervene as a party defendant, herein, and that the answer of defendant now on file be treated as the separate answer of your petitioner.

THE ECLIPSE SCAFFOLDING COMPANY,
By EGBERT WHITNEY.

STATE OF ILLINOIS,

County of Cook, ss:

Egbert Whitney, being first duly sworn, on oath states that he is the petitioner named in the foregoing petition; that he knows the contents thereof of his own knowledge and that the same is true as he verily believes, save such matters as are stated on information and belief, and as to those matters he believes them to be true.

EGBERT WHITNEY.

Subscribed and sworn to before me this 16th day of March, 1916.

[SEAL.]

I. V. CURRAN,

Notary Public.

Mar. 24, 1916. Petition of Egbert Whitney for injunction, etc., filed as follows:

36

Petition for Injunction.

Filed Mar. 24, 1916.

Petition.

Comes now Egbert Whitney, doing business under the name and style of The Eclipse Scaffolding Co. and states that he is the petitioner named in the petition filed herein asking leave to intervene; that he has been since the first day of August, 1912, engaged in the

business of selling or leasing or supplying scaffolding machinery at Omaha, Nebraska, under the firm name and style of The Eclipse Scaffolding Co.

Petitioner states that he has had scaffolding machines made for him by the Chain Belt Company of Milwaukee, Wisconsin, but that he has discontinued handling and selling the scaffolding machine known as the "Whitney Scaffold Hoist Machine," and that he has not handled any Whitney Scaffold Hoist Machines since prior to the filing of the bill of complaint herein; that to the best of his information and belief, defendant, the Chain Belt Co., has not made, sold or used any Whitney Scaffold Hoist Machines since prior to the filing of the bill of complaint herein; that the only machines now being handled or that have been handled by petitioner since prior to the filing of the bill of complaint herein, or that so far as he is informed and believes, have been made, sold or used by the Chain Belt Company, is a scaffolding machine known to the trade as the "Little Wonder" which petitioner states is different in construction, principle and operation from the Whitney Scaffold Hoist Machine and does not infringe any valid patent of plaintiff.

Petitioner states that the New York Scaffolding Co. and the Patent Scaffolding Company, and others associated with or acting for or through them, have by means of circulars, letters, and verbal statements, threatened to bring suit against practically every customer of petitioner's and has, in fact, brought the following suits:

American Safety Device Co. vs. Liebel-Binney Construction Co. at Erie, Pennsylvania.

New York Scaffolding Co. vs. Liebel-Binney Construction Co., at Erie, Pennsylvania.

New York Scaffolding Co. vs. R. H. Evans & Co., et al., at Columbus, Ohio.

New York Scaffolding Co. vs. D. W. McGrath, at Columbus, Ohio.

New York Scaffolding Co. vs. Grant Parsons, at Omaha, Nebraska.

37 New York Scaffolding Co. vs. F. J. Romer Construction Co. at St. Paul, Minn.

New York Scaffolding Co. vs. Egbert Whitney, Equity No. 82, at Omaha, Nebraska.

New York Scaffolding Co. vs. Egbert Whitney, Equity No. 91, at Omaha, Nebraska.

New York Scaffolding Co. vs. Olsen Construction Co., at Lincoln, Nebraska.

New York Scaffolding Co. vs. Bedford Stone & Construction Co. at Indianapolis, Indiana.

New York Scaffolding Co. vs. Columbia Mills, Inc. at Minnetonka, New York.

Petitioner is informed and believes that the bills of complaint in each of the above cases are substantially identical with the bill of complaint herein; that each of the defendants named have been users of or dealers handling scaffolding machines and equipment

obtained from petitioner, and such defendants neither handled nor used any other scaffolding machines or equipment than that obtained from or through petitioner and that the only reason for suing each of the defendants above referred to for patent infringement is for the purpose of reaching the scaffolding machines and equipment which said defendants have purchased or obtained from or through petitioner.

Petitioner states that in the suit of the New York Scaffolding Co. vs. Liebel-Binney Construction Co., pending at Erie, Pennsylvania, petitioner asked for and obtained leave to intervene therein as party defendant to protect his interests therein; that certain issues there involved were substantially the same as herein, claims 1 and 3 of the Henderson Patent being the basis of the suit and the "Whitney Scaffold Hoist Machine" being the device complained of, which the defendant has neither made nor sold for the past two years.

That as to the other suits, petitioner states that plaintiff is doing substantially nothing except in the suit filed in Omaha in 1912, wherein an accounting is proceeding before a Master. Petitioner further states that on September 3, 1915, suit was filed against him at Omaha, Nebraska, under the same claims 1 and 3 of the Henderson Patent here in suit alleging infringement on account of the "Little Wonder" machine here in suit. Nevertheless, petitioner states that plaintiff has by innuendo and otherwise, attempted to represent and has represented in substance to petitioner's customers and users that there is an injunction against the "Little Wonder" machine, whereas the fact is said "Little Wonder" machine

38 has never been passed upon by any court and has not been made the subject of an injunction by any court and does not infringe said claims, and plaintiff's actions in respect thereto, petitioner believes have been with the evident and intended purpose of frightening petitioner's customers and driving them away from petitioner in an effort to secure their business for plaintiff; petitioner states that plaintiff is now and has been for a long time following the practice of notifying the prospective customers of petitioner's immediately upon learning that such customers contemplated handling or using petitioner's scaffolding machines and equipment, that if they did so, they would be sued for infringement and for damages thereby rendering it practically impossible for petitioner to do business although substantially all of the numerous suits brought have been allowed to drag indicating that they were filed for the sole purpose of frightening away petitioner's customers and business and not because plaintiff believed it had substantial rights to be vindicated in such suits.

Petitioner believes and therefore charges the fact to be that plaintiff herein has begun said suits against your petitioner's customers for the purpose of putting your petitioner to unnecessary and burdensome expense in defending each of the suits hereinbefore mentioned whereas the question of the validity of the patent and infringement thereof by the scaffolding machines supplied by petitioner, and the question of recovery of profits and damages can be

tried in the present cause without the burden of defending a multiplicity of suits scattered all over the United States; that plaintiff has brought suits on various and different patents on account of the same devices although said patents were for different structures; in the suit against petitioner's customer, Liebel-Binney Construction Co. at Erie, Pa., brought by a subsidiary company, the "Whitney Scaffold Hoist Machines" were charged to infringe the Foster Patent No. 763,274. The court, however, held that patent invalid and dismissed the bill. That your petitioner is financially responsible and amply able to respond to any amount which may be taxed by this court against your petitioner as profits or damages arising out of infringement of plaintiff's patents by the manufacture, sale and use of all of petitioner's product should the court in the present cause hold your petitioner to be an infringer.

Petitioner states that because of such conduct on the part of the New York Scaffolding Co., and those associated with it or acting for or under its directions, he has lost large numbers of profitable deals which he otherwise would have made and failed to make because the prospective customers were frightened on account of the suits brought and the threats and warnings made to them. Petitioner states that he will be obliged to defend each and every suit brought against his customers, dealers, and users, and that he is compelled to furnish indemnifying bonds in practically every case where such suits are brought and where the threatening and warning circulars have been received, and that his expense in this particular is being increased beyond his burden to bear and unless the continuation of such methods on the part of plaintiff is restrained, he will be irreparably damaged and injured and his business very greatly, if not entirely, destroyed.

Petitioner states that in addition to the foregoing acts of plaintiff and its allied companies and associates, they have published and distributed to the customers of petitioner, circulars containing warnings and threats of suits against all who purchased scaffolding devices other than those of plaintiff, and in addition to such warning and threatening circulars, plaintiff has by its agents and representatives, verbally threatened practically all of the customers and prospective customers of petitioner, to bring suit against them if they handled, purchased, or used scaffolding devices made by petitioner.

Plaintiff, well knowing that the construction of the "Little Wonder" scaffolding machine handled by petitioner under its own patent in no wise infringes upon the patents of plaintiff, with intent, not to protect and maintain its own rights, but under color and pretense of that object to destroy petitioner's business and to involve it in a multiplicity of vexations and burdensome suits, and with intent to intimidate petitioner's customers, present and prospective, and preventing them from purchasing or otherwise obtaining scaffolding devices and machines, from petitioner, continuously, for a long time and still is, unfairly, wrongfully and maliciously threatening, intimidating and preventing the customers, both present and prospective of petitioner, from dealing with petitioner, by systematic

plans, methods, concerted conduct and action, in manner and form following, viz., stating verbally and by publishing and distributing false, injurious, malicious circulars, threatenng and intimidating circulars or letters containing intimidating threats of suit; by distributing circulars of like import among the customers and

40 prospective customers of petitioner; by spying upon petitioner's business thus ascertaining its customers present and prospective; by writing letters to petitioner's customers thus ascertained threatening suit against them under plaintiff's alleged patents; by causing the agents and employees of plaintiff to call upon the customers, present and prospective, of petitioner to make like threats; by pretended legal notices and advertisements in newspapers, booklets, circulars and the like, in and by each and all of which statements, circulars, letters, booklets, and otherwise, said customers, present and prospective, of petitioner have been and are unfairly, wrongfully, falsely and maliciously informed, either directly or by innuendo, that all scaffolds and scaffolding machinery being offered in competition with the New York Scaffolding Company's device are infringements of the so-called patents of plaintiff. By such conduct, plaintiff has prevented large numbers of prospective customers of petitioner from using its scaffolding devices and machines and has prevented many of petitioner's customers and users from paying for the scaffolding devices and machines which they have obtained from petitioner. Plaintiff's acts have been perpetrated throughout the country at large; it has interfered with affiant's business and customers in Boston, New York, St. Paul, San Francisco, Milwaukee, Indianapolis, Columbus, Cleveland, Cincinnati, St. Louis, Kansas City, Omaha, Lincoln, Grand Rapids, and various and numerous other cities and places throughout the United States; said statements, advertisements, circulars, publications and acts aforesaid, petitioner states on information and belief have not been made in good faith by plaintiff but under pretense and color of alleged patents with intent to injure and destroy petitioner's property, business and rights, all of which acts and doings of plaintiff have caused great and irreparable damage and injury to plaintiff for which it has not and can not have an adequate remedy at law.

Wherefore petitioner prays for proper orders issuing out of and under the seal of this Honorable Court restraining plaintiff, the New York Scaffolding Co., and any subsidiary company, licensee or other person or company acting with it, their officers, agents, servants, employees and attorneys or others in active concert or participating with them, from filing and bringing or causing to be filed or brought, in any court of the United States, either at

41 law or in equity, any suits against Egbert Whitney and The Eclipse Scaffolding Co. and any of his dealers, users or customers in scaffolding devices and equipment for infringement of any patent or patents, or like cause of action, or in any manner threatening so to do, until this suit shall have been tried and the issues involved herein finally and fully determined, and from prose

cutting any of the pending suits hereinbefore mentioned, save this one, until this suit shall have been fully and finally tried and determined.

Petitioner also asks for an order assigning this cause for final hearing at an early date to be definitely fixed to the end that the issues raised may be fully and finally determined as quickly as possible.

Petitioner also asks that a rule to show cause be issued directed to plaintiff, the New York Scaffolding Co., returnable on a day certain directing it to appear and show cause why the relief herein prayed should not be granted.

THE ECLIPSE SCAFFOLDING COMPANY,
By EGBERT WHITNEY.

WALLACE R. LANE,
GEORGE MANKLE,
Counsel for Petitioner.

STATE OF ILLINOIS,
County of Cook, ss:

Personally appeared before me Egbert Whitney, the petitioner above named, who, being by me first duly sworn, deposes and says that he is the petitioner above named, doing business under the firm name and style of The Eclipse Scaffolding Company, that he has read the foregoing petition and knows the contents thereof, that the same is true of his own knowledge except as to the matters therein stated on information and belief, and as to those matters he believes it to be true.

Subscribed and sworn to before me this 15th day of March, 1916.

[SEAL.]

I. V. CURRAN,

Notary Public in and for Cook Co., Ill.

Affidavit of W. C. Englar.

Filed Mar. 24, 1916.

Mar. 24, 1916. Affidavit of W. C. Englar, filed as follows:—

Affidavit.

STATE OF ILLINOIS,
County of Cook, ss:

W. C. Englar, being first duly sworn, on oath states that he is connected with Witherspoon-Englar Co. of Chicago, Illinois; that his company has been a customer and user of scaffolding machines and equipment obtained from The Eclipse Scaffolding Company of Omaha, Nebraska; that because of this fact, the New York Scaffolding Co. and the Patent Scaffolding Co. have repeatedly threatened suits for infringement, but that no such suits have been brought

against said Witherspoon-Englar Co. direct; that such warnings and threats have been exceedingly damaging because of their frequency and effect on the business of and those dealing with said Witherspoon-Englar Co.; that suit has recently been brought against Columbia Mills, Inc., of New York, charging infringement because of the use in the erection of a certain building in Minnetto, New York, of certain scaffolding machines by said Witherspoon-Englar Co. Affiant states that no machines are in use at Minnetto, New York, by Witherspoon-Englar Co. or as he is informed and believes, by Columbia Mills, Inc. at the present time and that none had been used there for months prior to the filing of the bill of complaint. Affiant states that his company has been greatly annoyed and damaged by these numerous threats and warnings, and by the above-named suit against Columbia Mills, Inc., in its business and reputation and affiant states that he knows of no reason why said suit against the Columbia Mills, Inc., should have been brought because any use of alleged infringing scaffolding machines had been discontinued so long prior to the filing of the bill of complaint and there is no danger or indication of any such use in the future.

Affiant states that The Eclipse Scaffolding Co. is defending Witherspoon-Englar Co. in all such matters and offered to defend Columbia Mills, Inc. in said suit, but is informed and believes that said

43 Columbia Mills, Inc. would not permit defense to be made but stated their intention to make terms with the New York Scaffolding Co. and let the suit go by default.

And further affiant saith not.

W. C. ENGLAR.

Subscribed and sworn to before me this 20th day of March, 1916.

[SEAL.]

ELLA M. KLATCHER,

Notary Public.

Affidavit of George F. Noland.

Filed Mar. 24, 1916.

Mar. 24, 1916. Affidavit of George F. Noland, filed as follows:—

Affidavit.

STATE OF OHIO,

County of Montgomery, ss:

George F. Noland, being first duly sworn, on oath states that he is the Vice-President and General Manager of the Structural Concrete Co. of Dayton, Ohio; that on or about the 16th day of February, 1916, the Structural Concrete Company received a telegram through the Western Union Telegraph Company in the regular course of business, a true copy of which is attached hereto and made a part hereof, said telegram being signed by C. P. Goepel and dated at New York, New York, February 16, 1916.

Affiant states that at the time this telegram was received, the Structural Concrete Company did not contemplate using any "Whitney Scaffold Hoist Machines" and that he knows of no reason why this telegram should have been sent, save for the purpose of producing fear of danger in the use of any scaffolding machines save such as might be offered by the New York Scaffolding Co.

Affiant states that as a result of this telegram, the Structural Concrete Co. was greatly annoyed and disturbed and immediately insisted that the Eclipse Scaffolding Co. and Egbert Whitney furnish it with suitable guarantee of protection in case of litigation such as was threatened in said telegram by the New York Scaffolding Co.

Affiant states that the Eclipse Scaffolding Co. and Egbert Whitney did furnish it with suitable guarantee of protection and assurance that in case of any litigation, they would fully protect and defend the said Structural Concrete Co. against patent infringement suits which may be brought by the New York Scaffolding Co.

And further affiant saith not.

GEO. F. NOLAND.

Subscribed and sworn to before me this 20th day of March, 1916.

[SEAL.]

WILLIAM M. MATTHEWS,

Notary Public.

Copy.

Telegram, Feb. 16, 1916.

(Letterhead Western Union Telegraph Company.)

138D NA Blue.

S. New York N. Y., 309 P., Feb. 16th, 1916.

Structural Concrete Co., Reibold Bldg., Dayton, O.:

According to information received learn you contemplate using Whitney Scaffold Hoist Machines please take notice that Egbert Whitney in case of New York Scaffolding Company versus Whitney has been restrained from using or selling such machines for use on scaffolds made according to claims one and three of its Henderson Patent Number Nine Five Nine Nought Nought Eight by an injunction issued out of the United States District Court after the Court of Appeals for the Eighth circuit held the Henderson Patent valid and infringed we notify you so that you have full notice and should you notwithstanding this notice infringe upon the rights of our clients New York Scaffolding Company suits for an injunction and an accounting for profits and damages will have to be filed against you in order to protect our client's rights in the premises.

C. P. GOEPEL.

Affidavit of Edward C. Strathmann.

Filed Mar. 24, 1916.

Mar. 24, 1916. Affidavit of Edward C. Strathmann, filed as follows:—

45

• Affidavit.

STATE OF INDIANA,

County of Indiana, ss:

Edward C. Strathmann, being first duly sworn, on oath states that he is Vice President of the Bedford Stone and Construction Company, of Indianapolis, Indiana; that said company is engaged in the contracting and construction business; that it has used certain scaffolding machines and equipment procured through the Eclipse Scaffolding Company of Omaha, Nebraska, but has not for many months used any such machine known as the "Whitney Scaffolding Hoist Machine." Affiant states that his company has found the Eclipse Scaffolding Company's machines and equipment very satisfactory in use and absolutely safe. Affiant further states that his company has recently been sued for infringement by the New York Scaffolding Co. in the United States District Court at Indianapolis, Indiana; that the Eclipse Scaffolding Company is defending said suit for affiant's company.

Affiant has been greatly damaged and annoyed in its business by reason of the threats made and suits brought by the New York Scaffolding Co. on account of its use of scaffolding machines and equipment obtained through the Eclipse Scaffolding Co. of Omaha, Nebraska.

And further affiant saith not.

EDWARD C. STRATHMANN.

Subscribed and sworn to before me this 22 day of March, 1916

[SEAL.]

HOWARD S. YOUNG,

*United States Com'r District of Indiana.**Affidavit of Egbert Whitney.*

Filed Apr. 8, 1916.

Apr. 8, 1916. Affidavit of Egbert Whitney, filed as follows:

46

Affidavit.

STATE OF NEBRASKA,

County of Douglas, ss:

Egbert Whitney, being first duly sworn, on oath states that he is informed and believes, having obtained his information from

other sources, from depositions taken and filed in the case of New York Scaffolding Co., vs. Liebel-Binney Construction Co., in the United States District Court for the Western District of Pennsylvania, among such witnesses being William E. Corne and Alfred E. Davidson, that the New York Scaffolding Co. has an interest in the affairs and business of the American Safety Device Co.; that the New York Scaffolding Co. is a holding company, does no manufacturing but owns certain patents. (Reference is made to the Davidson deposition, Pittsburgh case, pp. 13, 14 and 15). The New York Scaffolding Co. leases to the American Safety Device Co., (Davidson deposition, p. 13); the American Safety Device Co. in turn leases to the Patent Scaffolding Co. of New York (Davidson deposition, p. 14). The Patent Scaffolding Co. of New York does some manufacturing and leases to users. (Davidson deposition pp. 13, 14 and 15—Corne deposition, p. 36). The American Safety Device Co. also leases to the Western Patent Scaffolding Co. which company in turn leases to the Patent Scaffolding Co. of Illinois which is the operating company of the Western Patent Scaffolding Co. (John A. Granger deposition, p. 17). Affiant is informed and believes, and so states that all of the above mentioned companies are inter-related and working together to obtain scaffolding business, the New York Scaffolding Co. being the parent holding company of them all.

Alfred E. Davidson was at one time president and is now a stockholder in the New York Scaffolding Co. and at the present time is president of the Patent Scaffolding Co. of New York, president of the American Safety Device Co. and stockholder in the New York Scaffolding Co. (Davidson deposition, pp. 10 to 13, inclusive). William E. Corne, the present president of the New York Scaffolding Co. testified in the Pittsburgh case (deposition of Corne, p. 36)

"I am not familiar with all the details of the business as I do not devote my time to it, but am occupied in a separate business.

* * * Mr. Davidson is more familiar with it than I am.

* * * Mr. Davidson was a director in the company and at one time president. * * * Mr. Davidson is more familiar because he is an officer of The Patent Scaffolding Co. who does the manufacturing for the New York Scaffolding Co."

In other words, Mr. Corne testified that even though he is president of the New York Scaffolding Co., Mr. Davidson knew more about the business of the New York Scaffolding Co. than Mr. Corne, president.

Affiant further states that although the New York Scaffolding Co. claims to be the owner of the Henderson Patent here in suit, large numbers of the warning notices, circulars and threats have been made by the Patent Scaffolding Co.

Affiant further states that suit was brought against Harvey Stiver in Kansas City, Missouri, in 1912, as he believes on account of the use of "Whitney Scaffold Hoist Machines" and that it is not true that no suits were brought until after the decision of the Court of Appeals of the Eighth Circuit in 1915.

Affiant denies that he has attempted to evade connection with the "Little Wonder" machines but is now asking for early trial in the court to determine whether or not that machine is an infringement of any patents of plaintiff.

Affiant further states that there is a suit pending against him in the District of Nebraska on account of the "Little Wonder" machine which has not been brought on for trial but that the suit in this court was filed first and therefore affiant believes he is entitled to a hearing in this court first.

In the Pittsburgh suit, the Court did not deny the prayer of affiant as to the advertising therein complained of, but cautioned counsel for plaintiff to abstain from such advertising and said to counsel for defendant that it might have leave to renew its motion in evidence that such advertising was being continued, was presented and counsel for plaintiff gave Judge Orr his positive assurance that no further advertising would be done.

Affiant states that it is not true that the New York Scaffolding Co. did not as stated in the affidavit of Goepel, advertise or send out notices, until after the decision of the Court of Appeals of the Eighth Circuit, but that on or about October 3, 1912, Messrs. Goepel & Goepel, attorneys for the New York Scaffolding Co., wrote Messrs.

48 Lanquist & Illsley, as per copy of letter hereto attached and made a part hereof. On or about September, 1913, affiant received a letter from Dunphy-Fridstein Company, of Milwaukee, Wisconsin, a true copy of which is attached hereto and made a part hereof. The competitor mentioned in that letter affiant is informed and believes is the New York Scaffolding Co.

As early as September, 1913, the Patent Scaffolding Co. of Illinois, wrote to J. W. Utley, of Milwaukee, Wisconsin, as per copy of letter hereto attached and made a part hereof, stating that they were suing all users of the Whitney machines.

Affiant states that it is not true that the New York Scaffolding Co. and its attorneys, Goepel & Goepel, in their warnings and threats have always designated affiant's machine as the "Whitney Scaffold Hoist Machine." In a letter dated June 19, 1915, to Daniel W. McGrath of Columbus, Ohio, a customer of affiant's, Messrs. Goepel & Goepel speak of affiant's machine as "Whitney Machines" and "Little Wonder Machines." A copy of that letter is attached hereto and made a part hereof.

Affiant states that plaintiff and its attorneys have been notifying affiant's trade either directly or by innuendo that "all" scaffolds being offered in competition with the New York Scaffolding Co.'s devices are infringements of the so-called patents of plaintiff. On or about July 16, 1915, affiant received a letter from the George M. Chandler Company of Indianapolis, Indiana, a true copy of which is attached hereto and made a part hereof where such statement occurs.

Affiant further states that the New York Scaffolding Co. and its agents have attempted to take affiant's customers by promising immunity from suits if such customers would handle nothing but

New York Scaffolding Co. devices. On or about August, 1915, affiant received a letter from the Houser-Owen-Ames Co. of Grand Rapids, Michigan, stating substantially to that effect. A true copy of this letter is attached hereto and made a part hereof.

Affiant further states that he believes the advertising being done by the New York Scaffolding Co. is directed not against affiant's "Whitney Scaffold Hoist Machine" which was involved in the suit in the Eighth Circuit, and the manufacture and sale of which was discontinued before the Circuit Court of Appeals had passed on the question of the validity of the Henderson Patent and after Judge

Morris had held the patent invalid, but against affiant's "Little Wonder" machine which has never been considered by any court and which affiant states does not infringe upon any valid patent of the New York Scaffolding Co.; that plaintiff's intention was and is to lead the customers, present and prospective, of affiant to believe that the "Little Wonder" machine had been passed upon by the court; plaintiff's conduct in that respect has been unfair and deceptive.

Affiant states that the conduct of plaintiff in regard to the promissory sending of warnings, threats and so-called notices is continuing; that they do not take the form of a notice under Section 4900 of the Revised Statutes, but are sent repeatedly to the same party with continued and persistent threats.

And further affiant saith not.

EGBERT WHITNEY.

Subscribed and sworn to before me this 6th day of April, 1916.

[SEAL.]

HARRY O. PALMER,

Notary Public.

Copy.

Letter, Oct. 3, 1912.

Goepel & Goepel.

October 3rd, 1912.

Messrs. Lanquist & Illsley, 1100 North Clark St., Chicago, Ill.

GENTLEMEN: We beg to write you on behalf of the New York Scaffolding Company, who informed us that you are using a Whitney machine. We have examined the machine, and compared it with some of the patents owned by the New York Scaffolding Company, and we have advised the New York Scaffolding Company that they have a good cause for acting against you. We were requested to inform you of this fact, so that you do not knowingly infringe in the future.

We have brought suit against other contractors who are using Whitney machines, and we want to inform you of this fact so that you can act in a manner which will not necessitate suit against you.

Yours very truly,

GOEPEL & GOEPEL.

C. F. G./L.

Copy.

Letter, Sept. 13, 1913.

Wm. M. Dunphy, President.
 Meyer Fridstein, Mem. West. Soc. Engrs., Secretary and Treasurer.

Dunphy-Fridstein Company,
 Engineers and Contractors,
 Suit 812 Majestic Bldg.,
 Milwaukee, Wis.

Telephone Grand 272.

Chicago Office: 536 First Nat'l Bank Bldg.

Sept. 13, 1913.

Eclipse Scaffold Co., Omaha, Neb.

DEAR SIR: We have been informed by a competitor of yours that your machines are an infringement on his machine, and that if we use them will face a suit in the courts. Kindly advise us on this and if you have any such trouble we must have your guarantee that we will be protected.

Yours truly,

DUNPHY-FRIDSTEIN COMPANY.
 MEYER FRIDSTEIN, *Sect.-Treas.*

Copy.

Letter, Sept. 18, 1913.

The Patent Scaffolding Co.

(Of Illinois).

Patent Adjustable Safety Scaffolds for All Masonry Construction.

555 West Quincy Street.

Chicago, Sept. 18, 1913.

Mr. J. W. Utley, Milwaukee, Wis.

DEAR SIR: We learn from our New York office that you desire the use of five scaffold machines and call your attention to the enclosed circular.

We also learn you contemplate using the "Whitney" machine for this job and we respectfully advise you that our company, at the

present time, are suing Mr. Whitney for patent infringement and we are also suing all users of this machine.

51 The Sterling Construction Co., of your city had some experience with this machine and we suggest you ask them regarding the mechanical workings of same before you go further and you may save yourself considerable trouble outside of patent litigation.

We would be pleased to hear from you further on this subject and wish to advise that we have machines in Chicago which we can ship on short notice by boat arriving at Milwaukee next day after they are ordered.

Thanking you for past favor we remain,

Yours very truly,

PATENT SCAFFOLDING CO.
E. A. ALLEN.

Copy.

Letter, June 19, 1915.

Goepel & Goepel,

Dun Building, 290 Broadway, New York.

June 19th, 1915.

Mr. Daniel W. McGrath, 810 New First National Bank Bldg.,
Columbus, Ohio.

DEAR SIR: We are informed that you are using or contemplating the use of certain scaffolding devices which have U-shaped frames and which are intended to be used to make up a scaffolding platform for high buildings. Our information is that such U-shaped frames come from one Whitney originally of Omaha, Nebraska, and that such U-shaped scaffolding frames are either known as "Whitney" machines or as "Little Wonder" machines.

We are of the opinion that these machines are infringements of U. S. Letters Patent to Henderson, No. 959,008, which has lately been sustained by the Court of Appeals of the Eighth Circuit in the case of New York Scaffolding Company v. Egbert Whitney of Omaha.

Under these circumstances, we notify you of the rights in the premises, and in the event that you have used such machines we call upon you to make a satisfactory arrangement for profits and damages sustained, and also to assure us of the discontinuance of the machines complained of.

52 Under these special circumstances, we feel that we are entitled to an answer from you by return mail, especially in view of the fact that we are under retainer to bring suits against all infringers of the patent.

Very truly yours,

(Sgd.)

GOEPEL & GOEPEL.

Received June 23, 1915. D. W. McGrath. Ans. —. File No. —.

Copy.

Letter, July 16, 1915.

The Geo. M. Chandler Co.,

Machinery Merchants,

No. 9 N. Illinois St.

Phone Main 924.

Warehouse and Storage Yard: West Michigan St. and Belmont Ave.

Phone Belmont 397.

Indianapolis, Ind.

Indianapolis, Ind., July 16, 1915.

Eclipse Scaffold Co., Omaha, Neb.

GENTLEMEN: Last year we had up the matter of scaffolds with you, but the building business was not good, and we had no opportunity to place any of your machines.

This year the building trade is looking up a trifle, and we have brought the Eclipse Scaffold to the attention of several of the leading Building Contractors.

In calling on one of our friends today, in the conversation he stated that within the past two weeks, they had received a letter from a Mr. P. Goepel Atty. for the New York Scaffold Co. stating that all scaffolds being offered in competition with the New York Scaffold Co.'s devices were infringements and possible users or purchasers were warned against using them.

Will you kindly advise us if there are any late developments in the situation, and what assurance for protection we can give our trade that in the event of their using or purchasing the Eclipse Scaffold.

Awaiting your favors, we are

Yours very truly, THE GEO. M. CHANDLER CO.,
Per C. HENNING.

53

Copy.

Letter, Aug. 27, 1915.

Hauser-Owen-Ames Company,

General Contractors and Builders.

Grand Rapids, Mich., Aug. 27, '15.

The Eclipse Scaffolding Co., Omaha, Neb.

GENTLEMEN: In reply to your letter of Aug. 23rd will say that we had not heard from the New York Scaffolding Co. until one of their representatives called on us today.

He showed us a photographic copy of a notice in regard to the decision by the U. S. Court of Appeals at St. Paul reversing a previous decision and dated May 12, 1915. According to his statement, this settles the matter and upholds their patents making anyone using your machine liable to judgment amounting to the rent paid for the use of the same. Their proposition is that we agree to use only their machine during the next two years under which condition, they will overlook any claim which they believe they have against us on account of the use of your machines on two jobs.

We told their representative that we would not take any immediate steps in the matter as we wished to look up some points but would write them within a week or ten days and let them know what ground we would take. They claim that A. A. Albrecht of Detroit and Bentley of Toledo have both discarded the machines which they purchased from you.

We will be glad to hear from you fully in regard to the matter stating your side of the case.

Very truly yours,

HAUSER-OWEN-AMES CO.,
By D. W. KIMBALL.

54

Affidavit of William E. Corne.

Filed Apr. 4, 1916.

Apr. 4, 1916. Affidavit of William Corne, filed as follows:—

Affidavit.

STATE OF NEW YORK,

County of New York, ss:

William E. Corne, being duly sworn, deposes and says:

That the New York Scaffolding Company is a corporation entirely separate and distinct from the American Safety Device Company.

That the New York Scaffolding Company has no right or title or interest of any kind whatsoever in any of the patents or other property of the American Safety Device Company.

That the plaintiff has been put to great expense and trouble by Egbert Whitney, the petitioner herein, because of his persistent and wilful infringement of its rights.

That until the said Egbert Whitney began his infringement, the plaintiff's patent rights were universally respected, save for a few small infringements here and there.

That the aforesaid Henderson patent No. 959,008, has been a source of great profit to the plaintiff's licensees, and that it has at all times endeavored to protect its patent rights without regard to the expense or trouble involved, and that all suits brought by it have been brought in good faith and with the intention to push them to final hearing unless the defendant surrendered. The plaintiff has never

acquiesced in any infringement of its patent rights, and does not intend to acquiesce therein.

Plaintiff's advertising, as far as deponent knows and as he verily believes, only took place after the favorable decision of the Hon. Circuit Court of Appeals for the Eighth Circuit, in the case of plaintiff against Egbert Whitney, and this advertising was done in good faith and to notify the trade of plaintiff's rights, and of the necessity of respecting them.

The plaintiff has never authorized any other advertisement or warning save that infringement of its patent rights would be followed by legal action, so far as deponent knows and as he verily believes.

From the account filed by the said Egbert Whitney in the accounting now proceeding in the case of New York Scaffolding Company vs. Egbert Whitney, District of Nebraska, Omaha Division, Equity No. 82, a duplicate being annexed of the copy of said account served upon plaintiff, it appears that the said Egbert Whitney, as far as deponent

55 knows and as he verily believes, has been conducting his business at a loss and upon borrowed money for which he is paying a high rate of interest. Deponent verily believes that the said Egbert Whitney is financially irresponsible, and that it is necessary, for plaintiff's protection, to sue each and every infringer, so as to secure adequate damages and a partial reimbursement for its heavy expenses in maintaining its patent rights.

Neither plaintiff nor its licensees have ever sold the machines made under the said Henderson patent No. 959,008, but have always leased them at a weekly rental, and have at all times retained title in the aforesaid machines, so that each use by infringers of plaintiff's patented construction is a new and continued injury to its rights, and a new and continued source of damage and loss of profits.

As far as deponent knows and as he verily believes, the defendant herein, Chain Belt Company, never leased, sold or used the machines here in issue, but simply made them up on the order of the said Egbert Whitney, who sold or leased them to the trade.

(Sgd.)

WILLIAM E. CORNE

Sworn to and subscribed before me, this 31st day of March, 1916.

(Sgd.)

ALBERT B. TRIGGE,
Notary Public, Kings County.

Certificate Filed New York County, N. Y. Co. Clerk No. 16.

Affidavit of Carl P. Goepel.

Filed Apr. 4, 1916.

Apr. 4, 1916. Affidavit of Carl P. Goepel, filed as follows:—

Affidavit.

STATE OF NEW YORK,

County of New York, ss:

Carl P. Goepel, being duly sworn, deposes and says:—

That he is the solicitor and of counsel for the plaintiff herein, and has so acted throughout all the cases brought by the plaintiff herein on its Henderson patent No. 959,008.

That on or about the 10th day of October, 1912, the plaintiff herein filed a bill in equity in the United States District Court for the District of Nebraska, Omaha Division, against Egbert Whitney, the petitioner herein, for infringement of Henderson patent No. 959,008. This suit was brought in good faith, and it was thoroughly and carefully prepared and pushed at all times.

The plaintiff regarded this suit as a test suit, and prepared it with all possible care.

However, since the aforesaid division was at that time without a United States Judge, the case was not called for trial until September 22nd, 1913, and the hearing was postponed indefinitely on October 14th, 1913.

On December 17-18, 1913, the trial took place in open court before his Honor Judge Morris, especially assigned from another district.

The plaintiff prepared its case with great care, put on the stand an expert witness and a practical man well skilled in the art and promptly paid all other expenses such as typewriting the record, the printed brief, etc.

On February 22nd, 1914, his Honor Judge Morris filed an opinion dismissing the bill and thereupon on or about March 18th, 1914, the plaintiff duly and promptly prepared and filed the proper appeal papers.

The plaintiff thereupon prosecuted the appeal with all possible diligence, but it was not until December 17th, 1914, that the appeal was heard before the Honorable Circuit Court of Appeals for the Eighth Circuit and it was not until May 12th, 1915, that the Hon. Circuit Court of Appeals for the Eighth Circuit reversed the decision of the Hon. District Court in an opinion now reported in 224, Federal Reporter, 452.

On June 10, 1915, a petition for rehearing was filed by the said Egbert Whitney which was denied on August 26, 1915.

The defendant thereupon secured an order on or about September 10th, 1915, staying the mandate of the Hon. Circuit Court of Appeals until October 21st, 1915, on condition that the defendant,

Egbert Whitney, present a petition for a writ of certiorari unto the Hon. Supreme Court on the 1st day of the October term.

On September 28th, 1915, a petition for a writ of certiorari was filed with the Hon. Supreme Court by the said Egbert Whitney and on October 9th the plaintiff herein duly filed a memorandum in opposition thereto.

On October 19th, 1915, the petition for the writ of certiorari was denied by the Hon. Supreme Court and the order thereon was filed on October 22nd, 1915.

On October 25th, 1915, the mandate of the Hon. Circuit —
57 of Appeals was issued and it was not until November 15th, 1915, that the decree after mandate was signed by his Honor Thomas C. Munger and entered.

During all this period the plaintiff pushed its test case against the said Egbert Whitney with all possible diligence and at great expense and has been seriously injured by this long delay in securing a final decision hereon, since during this period of uncertainty various persons, instigated by the said Egbert Whitney have been infringing upon the said Henderson patent No. 959,008 in defiance of the plaintiff's rights.

It was not until the Hon. Circuit Court of Appeals for the Eighth Circuit had declared the Henderson patent No. 959,008 valid and infringed by the use of the "Whitney Scaffold Hoist Machine" according to the claims of the said Henderson patent that the plaintiff began to advertise of its rights and it was not until then that it brought suit against the other infringements of the aforesaid patent.

All the suits set forth on pages 2 and 3 of the petition of Egbert Whitney verified the 16th day of March, 1916, were brought on the following dates:

New York Scaffolding Co. v. Liebel-Binney Construction Company—Sept. 16th, 1914.

New York Scaffolding Co. v. R. H. Evans & Company, Sept. 2nd, 1915.

New York Scaffolding Co. v. D. W. McGrath, Sept. 2nd, 1915.

New York Scaffolding Co. v. Grant Parsons,—August 23rd, 1915.

New York Scaffolding Co. v. F. J. Romer Construction Company—August 24th, 1915.

New York Scaffolding Co. v. Egbert Whitney, doing business under the trade name and style of Eclipse Scaffolding Company, Equity No. 91, Sept. 3rd, 1915.

New York Scaffolding Co. v. Egbert Whitney (This being the test suit before referred to) October 10th, 1912.

New York Scaffolding Co. v. Olsen Construction Company—August 30th, 1915.

New York Scaffolding Co. v. Bedford Stone & Construction Company—February 28th, 1916.

New York Scaffolding Co. v. Columbia Mills, Inc., February 7th, 1916.

None of these aforesaid suits have as yet come up for trial, much to plaintiff's regret, save the action of New York Scaffolding

58 Company v. Liebel-Binney Construction Company, which came on for final hearing before his Hon. Judge Orr on or about Oct. 12th, 1915. At this trial the plaintiff at great expense brought on a number of witnesses including an expert witness from New York, N. Y., introduced models of the device of the Henderson patent, had photographs thereof to properly present its case before the court and spared no time and expense in securing a second adjudication. The defendant on the contrary did not put a single scrap of evidence and did not put a single witness on the stand but rested its case immediately after plaintiff rested.

The plaintiff is ready and anxious at all times to try any of the above mentioned cases and not one of them has been allowed to drag. The only reason why they have not been brought up for trial is because they have not been set down for final hearing by the Hon. District Courts having jurisdiction thereof.

Having been informed by the New York Scaffolding Company when it purchased this aforesaid Henderson patent No. 959,008 from the patentee Elias H. Henderson, that the aforesaid Elias H. Henderson had not fulfilled the requirements of Section 4900 of the Revised Statutes relative to marking the scaffolds made under the aforesaid Henderson patent, the deponent is advised and verily believes that in order to collect damages it is necessary to notify each infringer and that furthermore in order to show good faith it is necessary to promptly bring suit for infringement, if an infringer disregards such warning and that all the advertising of the aforesaid decision of the Hon. Circuit Court of Appeals for the Eighth Circuit has been confined to printing and circulating the majority opinion of the aforesaid Hon. Circuit Court of Appeals for the Eighth Circuit together with other advertisements, calling attention to this decision, and which as deponent verily believes and as he has advised are absolutely truthful and correct in each and every particular.

In the aforesaid action of the New York Scaffolding Company versus Liebel-Binney Construction Company the said Egbert Whitney intervened and prayed that the plaintiff herein be enjoined from further advertising the aforesaid decision of the Hon. Circuit Court of Appeals for the Eighth Circuit and from bringing any additional suits upon the aforesaid Henderson patent and their Honors Judge Orr and Judge Thompson sitting in equity in the United States District Court for the Western District of Pennsylvania, denied the prayers of the said Egbert Whitney with respect to enjoining the plaintiff herein from further advertising and from further bringing suits against infringers.

59 The defendant, however, was given permission to take and did take depositions in the effort to show that the plaintiff herein had injured its business by its advertising and bringing suits as aforesaid, but although the plaintiff was put to great expense in attending these depositions and in rebutting them they were not even offered in evidence at final hearing.

After the hearing before the said Hon. Judges Thompson and Orr before stated deponent was informed by George Mankle, Esq., of

counsel for Egbert Whitney that the machine put in evidence by the plaintiff at the final hearing in the aforesaid case of New York Scaffolding Company v. Egbert Whitney which went to the Hon. Circuit Court of Appeals for the Eighth Circuit was known in the trade as the "Whitney Scaffold Hoist Machine," and deponent can state that such is the name by which the machine is known in the trade and the plaintiff has always been careful to so designate this adjudicated machine in all its advertisements, warnings, etc., as far as deponent knows, and as he verily believes.

With respect to the Scaffolding Machines put out by Egbert Whitney under the trade designation of "Little Wonder" the before mentioned action of the plaintiff herein against Egbert Whitney Equity No. 91 was brought to restrain the further making, sale or use of these "Little Wonder" machines and in the accounting instituted in the aforesaid action equity No. 82, the New York Scaffolding Company v. Egbert Whitney, the plaintiff has moved that these "Little Wonder" machines be included in the scope of the accounting and the plaintiff has already served due notice based upon affidavits, exhibits and the like upon the said Egbert Whitney that it will move for a supplemental injunction restraining the further making, selling or using of the aforesaid "Little Wonder" machines, and that the defendant Egbert Whitney be punished for contempt of court for having put out the aforesaid "Little Wonder" machines.

The said Egbert Whitney has persistently attempted to evade every effort of the plaintiff to connect him with the aforesaid "Little Wonder" machines or to disclose the true structure and operation of the aforesaid "Little Wonder" machines. In the aforesaid action

New York Scaffolding Company v. Egbert Whitney, Equity
60 No. 91, when the plaintiff herein filed interrogatories under

Equity Rule 58, to connect the said Egbert Whitney with these "Little Wonder" machines, the said Egbert Whitney filed objections to said interrogatories and further refused to answer all questions upon the aforesaid accounting relative to the said "Little Wonder" machines.

The only warnings that have been sent to the Witherspoon-Englar Company have been the ordinary caution not to infringe upon plaintiff's patents.

The telegram sent to the Structural Concrete Company set forth in the affidavit of George F. Noland verified the 20th day of March, 1916, was sent upon deponent's advise so that if any infringement occurred which deponent was informed was likely, then damages could be collected from the aforesaid Structural Concrete Company.

CARL P. GOEPEL.

Sworn to and subscribed before me, this 1st day of April, 1916.

JOHN J. HYNES.

Bronx Co. Clk. 46 Bronx Co. Reg. 821.

N. Y. Co. Clk. 50 N. Y. Co. Reg. 8096.

Order of Apr. 21, 1916.

Apr. 21, 1916. Rule to show cause, filed as follows:

Upon application made in open court for an order requiring the above named defendant and the intervenor, Egbert Whitney, to produce for the inspection of the plaintiff, and for use at the final hearing as may — deemed necessary, the matters and things referred to in the annexed order.

It Is Ordered: That said Chain Belt Company, defendant, and Egbert Whitney, intervenor, and each of them, show cause before this court in the Government building, in the City and County of Milwaukee, Wisconsin, on the 29th day of April, 1916, at ten o'clock A. M. of said day, or as soon thereafter as counsel may be heard, why an order should not be made and entered, requiring the said defendant, Chain Belt Company, and said intervenor, Egbert Whitney, to produce for the inspection of the plaintiff and for use at the final hearing, as may be deemed necessary the matters and things referred to in the annexed order.

F. A. GEIGER, *Judge.*

61 Service of the foregoing order and accompanying order, by receipt of copies thereof, is acknowledged this 22nd day of April, 1916.

Solicitor for Defendant.

Reed. copy of order Apr. 22, 1916.

GEO. MANKLE,
Of Counsel for Defdt.

Supplemental and Additional Bill of Complaint.

Filed Apr. 27, 1916.

Apr. 27, 1916. Supplemental and additional bill of complaint, filed as follows:—

Proposed Supplemental and Additional Bill of Complaint.

The plaintiff, New York Scaffolding Company, for its supplemental and additional bill of complaint, respectfully sets forth as follows:—

1. That on or about the 10th day of October, 1912, it filed a bill of complaint against the intervenor, Egbert Whitney, who is of Omaha, Nebraska, in the Hon. United States District Court for the District of Nebraska, Omaha Division, for infringement of U. S. patent No. 959,008, dated May 24th, 1910, to Elias H. Henderson, here in issue.

2. That upon final hearing duly had, the said Hon. District Court dismissed the bill of complaint of the plaintiff herein.

Thereupon the plaintiff herein, being also the plaintiff in the aforesaid case, duly appealed from the said decree of the said Hon. District Court unto the Hon. Circuit Court of Appeals of the Eighth Circuit, and thereupon, upon due argument being had on or about May 12, 1915, the said Hon. Circuit Court of Appeals of the Eighth Circuit filed an opinion in which it reversed the decree of the said Hon. District Court, and declared the said Henderson Patent No. 959,008 valid and infringed by the said Egbert Whitney, the intervenor herein.

That thereupon the said Egbert Whitney applied for a writ of certiorari unto the Hon. United States Supreme Court, which writ was denied on or about the 19th day of October, 1915.

That thereupon on or about the 15th day of November, 1915, a decree after mandate was duly signed and entered in the said U. S. District Court for the District of Nebraska, Omaha Division.

A certified copy of the said decree after mandate is hereunto annexed and made a part of this supplemental and additional bill of complaint.

3. On information and belief, that the defendant herein, the Chain Belt Company, manufactured for the said Egbert Whitney the machines held to be an infringement of the said Henderson patent No. 959,008 by the said Hon. Circuit Court of Appeals of the Eighth Circuit, as before mentioned, these machines being known as "Whitney Scaffold Hoist Machines," and that the said defendant, Chain Belt Company, has also manufactured for the said Egbert Whitney, the intervenor herein, other scaffold hoisting machines known in the trade as "Little Wonder" machines. These machines, on information and belief, were manufactured by the defendant herein for the said Egbert Whitney before the filing of the original bill of complaint herein, and after January 1st, 1912.

These aforesaid machines were made with the intent and for the purpose that they be combined with scaffold planking so as to make scaffolds, according to claims 1 and 3 of the Henderson patent in issue, and they have so been used by the trade since January 1st, 1912, and before the filing of the bill of complaint herein, on information and belief, and the making and distribution of the aforesaid machines were an infringement of the said claims 1 and 3 of the Henderson patent here in issue.

4. On information and belief that the defendant herein, the Chain Belt Company, has acted as the agent of the said Egbert Whitney, in distributing and selling the aforesaid Whitney Scaffold Hoist Machines, and the aforesaid "Little Wonder" machines, between January 1st, 1912 and the filing of the original bill of complaint herein, and that in particular the said Chain Belt Company, the defendant herein, maintained a storehouse or place of storage, in which it stored and kept the aforesaid machines it made for the said Egbert Whitney, as well as cable for the said machines, and

distributed and shipped the aforesaid machines and the aforesaid
able at the request or order of the said Egbert Whitney, to various
customers of the said Egbert Whitney.

5. On information and belief that the said Egbert Whitney, the
intervenor herein, upon the bringing of the before-mentioned suit
against him on or about the 10th day of October, 1912,
agreed to indemnify, and did indemnify the defendant
herein against all loss which it might suffer because of any
infringement of the patent here in issue, and also agreed to conduct
all defenses against the patent in issue, because of the making of the
aforesaid machines by the defendant herein for and on behalf of
the intervenor herein, and that this was consented to by the defend-
ant herein, and that when the said Egbert Whitney defended the
before-mentioned suit brought against him on the 10th day of Octo-
ber, 1912, he also defended the aforesaid suit for and on behalf of
the present defendant herein, the Chain Belt Company.

Wherefore, plaintiff prays that an injunction issue, under the
seal of this court, against the said Egbert Whitney, the intervenor
herein, adjoining him and his agents, employees and workmen,
from infringing upon the patent herein, or upon the plaintiff's rights
in and thereto in any manner whatsoever, and that the said Egbert
Whitney be decreed to pay over unto the plaintiff herein, all the
profits he has made from his aforesaid infringements, as well as all
the damage that the plaintiff has suffered by reason of the aforesaid
infringements, as well as treble damages, and that the said Egbert
Whitney be further decreed to account unto the plaintiff herein for
all the aforesaid profits and damages.

NEW YORK SCAFFOLDING COMPANY,

By WILLIAM E. CORNE, *President*.

C. P. GOEPEL,

Solicitor for Plaintiff.

290 Broadway, New York, N. Y.

STATE OF NEW YORK,

County of New York, ss:

William E. Corne, being duly sworn, deposes and says:

That he is the President of the New York Scaffolding Company,
the plaintiff herein.

That he has read the above supplemental and additional bill of
complaint, and knows the contents thereof, and that the same are
true of his own knowledge save as to those matters therein stated to
be alleged on information and belief, and as to those matters he be-
lieves them to be true.

WILLIAM E. CORNE.

Sworn to and subscribed before me, this 14th day of April,
1916.

[SEAL.]

HERMAN KURBLOCK,
Notary Public, New York County.

Order of Apr. 21, 1916.

Apr. 21, 1916. Order to show cause, filed as follows:—

Order.

Upon reading the petition and affidavit of Carl P. Goepel, verified the 17th day of April, 1916, it is

Ordered

That the defendants show cause on Apr. 29th, 1916 why the proposed supplemental and additional bill of complaint of the plaintiff herein should not be filed, and why the intervenor herein, Egbert Whitney, should not answer unto the matters set forth in the said supplemental and additional bill of complaint within ten (10) days from the service thereof upon his counsel herein.

F. A. GEIGER, *Judge.*

Received copy of the foregoing order and accompanying petition and affidavit, this 22nd day of April, 1916, but no copy of the mentioned supplemental bill.

GEO. MANKLE,

Of Counsel for Defendant.

Petition.

Filed Apr. 21, 1916.

Apr. 21, 1916. Petition for leave to file supplemental and additional bill, filed as follows:—

Petition.

Your petitioner, New York Scaffolding Company, respectfully sets forth as follows:

That the intervention of Egbert Whitney herein, according to the order of this Hon. Court, renders it highly advisable and necessary for the plaintiff herein to plead a prior adjudication against the said Egbert Whitney, as set forth in the annexed supplemental and additional bill of complaint.

That the intervention of the said Egbert Whitney further makes it advisable and necessary for the plaintiff herein to set
65 forth certain additional matters, as set forth in the said supplemental and additional bill of complaint herein.

Wherefore, your petitioner respectfully prays that this Hon. Court permit the said supplemental and additional bill of complaint to be filed, and that all further proceedings be had according to law.

NEW YORK SCAFFOLDING COMPANY,

By C. P. GOEPEL, *Solicitor.*

Affidavit of Carl P. Goepel.

Filed Apr. 21, 1916.

Apr. 21, 1916. Affidavit of Carl P. Goepel, dated April 17, 1916, filed as follows:—

Affidavit.

STATE OF NEW YORK,
County of New York, ss:

Carl P. Goepel, being duly sworn, deposes and says:

That he is solicitor for the plaintiff herein.

That he has read the supplemental and additional bill of complaint herein, and that he verily believes that the said supplemental and additional bill of complaint is well founded in law, and that the filing thereof is highly desirable and necessary for the proper maintenance of this action.

That this supplemental and additional bill of complaint is being filed in good faith, and not for purposes of delay, and that the plaintiff is diligently preparing to go to trial, and expects to be ready on the day set for the trial by order of this Hon. Court.

CARL P. GOEPEL.

Sworn to and subscribed before me, this 17th day of April, 1916.

D. LEWIS MATTERN,
Notary Public, Kings County, No. 284.

Registered in New York County No. 339. Term Expires March 30th, 1917.

Order of Apr. 29, 1916.

Apr. 29, 1916. Order granting leave to file supplemental bill of complaint, etc., filed as follows:—

April 29, 1916.

Before Honorable Ferdinand A. Geiger, Judge.

This day came the parties by their counsel, and the motion for leave to file a supplemental bill came on to be heard, and by consent of counsel,

It Is Ordered by the Court that the plaintiff have leave to file its supplemental bill of complaint;

Further Ordered that the trial of this cause be set for May 29, 1916;

Further Ordered that the defendant answer the revised interrogatories propounded by the plaintiff;

Further Ordered that on application of the plaintiff a subpoena or subpoenas duces tecum issue for the production of papers, etc. at the trial.

Answers to Plaintiff's Revised Interrogatories.

Filed May 18, 1916.

May 18, 1916. Answers to revised interrogatories propounded by plaintiff, filed as follows:—

Answers to Revised Interrogatories Filed by Plaintiff.

Comes now the Chain Belt Company, defendant in the above-entitled cause and makes answer to the revised interrogatories filed by plaintiff herein as follows:—

Interrogatory No. 1. Between the dates mentioned, defendant made scaffolding machines for Egbert Whitney, doing business under the name and style of the Eclipse Scaffolding Company of Omaha, Nebraska, which were known as "Whitney Scaffold Hoist Machines." The manufacture of "Whitney Scaffold Hoist Machines" was discontinued November 11, 1913. Defendant has not since November 12, 1913, made, sold or used any "Whitney Scaffold Hoist Machines" and has not now on hand any complete "Whitney Scaffold Hoist Machines."

Interrogatory No. 2. Yes. The Chain Belt Company began making "Little Wonder" machines April 3, 1914.

CHAIN BELT COMPANY,
By DONALD FRASER, V. P.

67 STATE OF WISCONSIN,
County of Milwaukee, ss:

Donald Fraser, being duly sworn on oath states that he is Vice President & Supt. of the defendant, Chain Belt Company, and is familiar with its affairs and with those affairs set forth in the revised interrogatories propounded by plaintiff; that the answers above set forth are true of his own knowledge to the best of his information and belief.

DONALD FRASER.

Subscribed and sworn to before me this 16th day of May, 1916.

[SEAL.]

E. F. WHIPP,
Notary Public.

My commission expires March 28, 1920.

Answer to Supplemental and Additional Bill of Complaint.

Filed May 8, 1916.

May 8, 1916. Joint answer of defendants to supplemental bill of complaint, filed as follows:—

The Joint and Several Answer of Defendants to the Supplemental and Additional Bill of Complaint.

Defendants, Chain Belt Company and Egbert Whitney, file this their joint and several answer to the supplemental and additional bill of complaint and say:

1. They admit that on or about the 10th day of October, 1912, a bill of complaint was filed against Egbert Whitney in the United States District Court for the District of Nebraska, alleging infringement of Letters Patent No. 959,008, to Elias H. Henderson, dated May 24, 1910.

2. They admit that upon the final hearing in said suit in the District of Nebraska, the court dismissed the bill of complaint and attention is directed to Exhibit No. 1, attached to the original answer herein. As to the other matters and things stated in paragraph 2 of the supplemental bill, defendants leave plaintiff to make such proofs thereof as it may deem advisable but deny each and every of such matters in the form as stated.

3. Defendants admit that the Chain Belt Company manufactured for the said Egbert Whitney for a time, "Whitney Scaffold Hoist Machines" but defendants state that this manufacture was discontinued prior to the filing of the original bill of complaint herein. Defendants also admit that the Chain Belt Company has manufactured for the said Egbert Whitney, scaffolding machines know as the "Little Wonder." Defendants specifically deny that any of these machines were made with the intent or for the purpose that they be combined so as to make scaffolds according to claims 1 and 3 of the Henderson Patent in suit; deny that they have been so used by the trade since January 1, 1912, and before the filing of the bill of complaint herein or at any time, and deny that the making and distribution of said machines constituted an infringement of claims 1 and 3 of the Henderson patent in suit, and defendants specifically deny each and every allegation of said paragraph three of the supplemental bill not herein specifically admitted or denied.

4. Defendants deny that the Chain Belt Company has acted as the agent of the said Egbert Whitney in distributing and selling "Whitney Scaffold Hoist Machines" or "Little Wonder" machines between January 1, 1912, and the filing of the original bill of complaint herein or at any time; deny that the Chain Belt Company has ever had any connection with said Egbert Whitney save as hereinbefore pointed out in manufacturing for said Egbert Whitney, scaffolding machines of the kind and during the dates hereinbefore mentioned.

Defendants deny each and every allegation of paragraph fourth of the supplemental bill in form as stated.

5. Defendants admit that the said Egbert Whitney agreed to defend and indemnify the Chain Belt Company against loss which might be suffered because of infringement suits but defendants deny each and every other allegation of said paragraph fifth of the supplemental bill in form as stated.

6. Defendants further answering state that in a suit pending in the United States District Court for the Western District of Pennsylvania, wherein the New York Scaffolding Company, plaintiff herein, was plaintiff, and the Liebel-Binney Construction Company of Erie, Pennsylvania, was defendant, that Egbert Whitney, one of the defendants here, intervened and was permitted by order of court to become a party defendant; that said cause was tried at final hearing on October 11th and 12th, 1915; that said suit was based on the

Henderson Patent No. 959,008, particularly claims 1 and 3; 69 that the machine charged there to infringe was the "Whitney Scaffold Hoist Machine"; that on the 28th day of April, 1916, the said court by his Honor, Judge Orr, rendered an opinion holding the Henderson Patent in suit invalid and that the "Whitney Scaffold Hoist Machine" was not an infringement. A duly certified copy of said opinion is ready here in court to be produced and a copy is attached hereto and made a part hereof. A certified copy of the bill and answer and proofs in said cause is also ready here in court to be produced.

7. Defendants deny that plaintiff is entitled to any of the relief sought or prayed for either in the original bill of complaint or in its supplemental and additional bill of complaint; deny that any injunction should issue against Egbert Whitney, intervener herein, as prayed or otherwise and pray that both the bill of complaint and the supplemental and additional bill of complaint should be dismissed at the cost of plaintiff.

CHAIN BELT COMPANY,
By WALLACE R. LANE,

Its Attorneys.

EGBERT WHITNEY,

*Doing Business under the Name and Style of the
Eclipse Scaffolding Company,*

By WALLACE R. LANE,

His Attorney.

WALLACE R. LANE,
GEORGE MANKLE,

Solicitors and of Counsel for Defendants.

Amended Answer to Supplemental and Additional Bill of Complaint.

Filed May 23, 1916.

May 23, 1916. Amended joint answer of defendants supplemental bill, filed as follows:—

The Joint and Several Additional Answer of Defendants to the Supplemental and Additional Bill of Complaint.

Come now the defendants, Chain Belt Company and Egbert Whitney, and in compliance with order of court entered herein on May 20, 1916, amend the last clause of paragraph five of their said joint and several answers to the supplemental and additional bill of complaint herein as follows, to-wit:

Cancel the last clause of said paragraph five which reads as follows:—

"But defendants deny each and every other allegation of said paragraph five of the supplemental bill in form as stated."

and add the following:—

"Defendants admit that said Egbert Whitney agreed to conduct the defense of this suit and that this was consented to by the Chain Belt Company."

"Defendants deny that when the said Egbert Whitney defended the suit brought against him on the 10th day of October, 1912, that he also defended for and on behalf of the Chain Belt Company, and defendants deny every other allegation of said paragraph five of said supplemental and additional bill of complaint not herein specifically admitted or denied."

CHAIN BELT COMPANY,
By WALLACE R. LANE,
Its Attorneys.

EGBERT WHITNEY,
Doing Business under the Name and Style
of the Eclipse Scaffolding Company,
By WALLACE R. LANE,
His Attorney.

WALLACE R. LANE,
GEORGE MANKLE,
Solicitors and of Counsel for Defendants.

Amendment to Answers.

Filed June 1, 1916.

June 1, 1916. Amendment to answer filed as follows:—

Amendment to Answers.

Come now the defendants in the above entitled cause, Chain Belt Co. and Egbert Whitney and, with leave of court first had, file this their joint and several amendment to their joint and several answers heretofore filed herein,—

Defendants allege that the device disclosed and claimed in the

Henderson patent No. 959,008 was known to and publicly used in the United States by the following:

- New York Scaffolding Co. New York City at Chicago, Ill.
Patent Scaffolding Co. New York City, at Chicago, Ill.
71 Patent Scaffolding Co. of Ill. Chicago, Ill. at Chicago, Ill.
Geo. A. Fuller Co. Chicago, Ill. at Chicago, Ill.
Louis La Belle Chicago Ill. at Chicago, Ill.

prior to the date of said alleged invention of Elias H. Henderson.

CHAIN BELT CO.,

By WALLACE R. LANE, *Attorney*.
EGBERT WHITNEY,

By WALLACE R. LANE, *Attorney*.

June 1, 1916.

Final Hearing, May 29th, 1916.

Appearances:

For the Plaintiff: Goepel & Goepel, by Mr. C. P. Goepel; Mr. Frank K. Burke.

For the Defendants: Wallace R. Lane and George Mankle.

Offers in Evidence.

Transcript of Testimony.

Plaintiff's Counsel offer in evidence:

Certified copy of certificate of incorporation.

By the Court: Those matters are not in issue under the pleadings.

Certified copy of patent in suit to Henderson.

Marked Plaintiff's Exhibit No. 1.

Assignment from Elias H. Henderson to the Henderson Scaffold Hoist Company.

Marked Plaintiff's Exhibit No. 2.

Assignment from The Henderson Scaffold Hoist Company to the New York Scaffolding Company, Plaintiff.

Marked Plaintiff's Exhibit 3.

By Mr. Goepel: I ask Your Honor to take judicial notice of the decision of the Circuit Court of Appeals, Eighth Circuit, 244 Fed. R. 452.

Objected to by defendants, unless the complete record comes in to show the patent before the court.

Objection overruled. Defendants except.

72 Certified copy Whitney Patent, No. 998,270.

By Mr. Goepel: Simply to show what the Circuit Court of Appeals referred to in the opinion.

Objected to, as not properly proved.
Objection overruled. Defendant excepts.

Marked Plaintiff's Exhibit No. 4.

Certified copy of decree in the case of the New York Scaffolding Company vs. Whitney, which is on file in this court. Simply for the purpose of showing the range of equivalents considered by the court in its opinion.

Objected to as incompetent, irrelevant and immaterial, except as the complete record goes in to show what was before the court.

Received. Defendants except.

Marked Defendant's Exhibit No. 5.

By Mr. Lane: We have no objection to the complete record going

in.

Plaintiff offers in evidence certified copy of the opinion of the Court by His Honor Judge James E. Munger, dated May 18, 1916, simply for the purpose of showing the range of equivalents considered in the opinion.

By the Court: I assume all of these are proper to use in the case.

Objected to as incompetent, irrelevant and immaterial as tending to disprove any of the issues here.

Marked Plaintiff's Exhibit 6.

Certified copy 1,114,832, Patent to Whitney, simply for the purpose of showing what was referred to in the opinion of his honor Judge Munger.

Same objection. Same ruling.

Marked Plaintiff's Exhibit No. 7.

Plaintiff offers in evidence, for specific reference thereto, certified copy of interrogatories and answers thereto, on file in this case, being interrogatives Nos. 1 and 2 as revised by this court and referring to the manufacture of the machines by the defendant Chain Belt Company.

By Mr. Lane: May we not have received in evidence all the interrogatories on both sides?

By the Court: I think they become a part of the record.

By Mr. Goepel: To be safe, I offer them specifically. We only offer one or two at the present time.

By the Court: I always assume these interrogatories, under the new rule, became part of the record.

By Mr. Goepel: I withdraw that offer. Cancel the whole.

Plaintiff offers in evidence certified copy file wrapper of the Henderson Patent in suit, No. 959,008.

Marked "Plaintiff's Exhibit 8."

Also the various patents referred to in the file wrapper just offered, certified copies of the same.

Patents: Bowyer and Casperson marked Plaintiff's Exhibit 9.

Orlando B. Howe. Marked Plaintiff's Exhibit No. 10.

Henry B. Crandall. Marked Plaintiff's Exhibit No. 11.

William J. Murray. Marked Plaintiff's Exhibit No. 12.

Louis H. Harpin and Theophile H. Harpin, Marked Plaintiff's Exhibit 13.

Johann Sladek. Marked Plaintiff's Exhibit No. 14.

Testimony of Daniel F. Cavanagh.

DANIEL F. CAVANAGH, called by plaintiff, being sworn testified:

Direct examination.

By Mr. Goebel.

1 Q. What is your age and residence?

A. I am 34 years of age. I live at 5042 Chichester Ave., Jamaica, Long Island.

2 Q. What is your business?

A. Scaffold rigger.

3 Q. For how long a time have you been scaffold rigger?

A. Since 1904.

4 Q. And in 1904, what kind of scaffolds did you rig?

A. Cavanagh scaffold machine.

5 Q. Before that time did you notice any scaffold devices on the market?

A. Before 1904 the scaffolds that I seen on the market were thrustouts. That machine was made with beams, they call thrustouts, shoved out from the floor of the building, a platform built on them for bricklayers to stand on—for the bricklayers working to a certain height. With these scaffolds it was necessary to put horses on top of the scaffolds they had just stood on, and then put planks on top of the horses to raise the scaffold for the bricklayers to lay the rest of the brick.

6 Q. Was there any other type of scaffold of that kind on the market before 1904?

74 A. The latter part of 1904, there was a scaffold called the "Bar" scaffold.

Objected to by defendant's counsel as incompetent, irrelevant and immaterial, and not within the issues in this case.

Objection overruled.

Defendant excepts.

7 Q. Please describe briefly the type known as the bar type of scaffold.

A. The bar type of scaffold was a scaffold made of iron bars, wooden outriggers, put out four or five floors above the sidewalk. These bars were bolted on to the outrigger—hung down the face of the building. Put-logs were put on these bars where the mason's scaffold was put for the bricklayers to stand on.

8 Q. And was there any other type before 1904?

A. Pole scaffold.

9 Q. Describe briefly that type of scaffold.

A. The pole scaffold was a scaffold where long poles were set into barrels of sand. Putlogs were tied on to these poles and raised as the bricklayers worked, with platform for the bricklayers to stand on.

10 Q. Please describe briefly the disadvantages of these three types of scaffold.

A. The disadvantages of these three types of scaffold were—

By The Court: Is this a part of your case?

By Mr. Goepel: The idea being to point out what the art was at the time when this entirely new development took place.

By The Court: Whatever it was, you have a patent. Of course the patent itself is prima facie evidence of its novelty and patentability. At this time, if received at all, it is predicated upon probably your assertion of a doubt as to the validity of the patent. The presumption carries the case to the defendant, the moment you go to support the presumption you are yourself in a position of casting doubt upon that presumption.

By Mr. Goepel: I will leave that line of examination and go to the other.

11 Q. What are your duties at the present time?

A. Scaffold rigger.

12 Q. In what manner are scaffolding devices that you erect, shipped from the factory?

A. They are sent out singly, drums, putlogs are single, outriggers, anchor bolts, shackles—all sent out in pieces.

13 Q. In what manner are they shipped back to the factory?

A. In very near the same manner as we ship them out.

14 Q. To what extent are the scaffoldings rigged by you, and have been rigged by you during the last two or three years?

A. During the last two years I have been rigging to the extent of 25 to 30 of those machines a day.

15 Q. Will you please produce a frame and hoisting device and putlogs?

By Mr. Goepel: They are outside.

By Mr. Lane: Consider them produced.

By Mr. Lane: Objected to unless it has some bearing upon the patent in suit. The question is not limited to the patent in suit, and is incompetent and irrelevant—has no bearing.

Objection overruled.

Defendant excepts.

By The Court: I assume it will be proper for illustrating purposes, in any event.

By Mr. Goepel: In view of your honor's intimation—it is true a patent is prima facie evidence of novelty. That brings the question up in my mind whether I should produce this in my point, or could have permission to produce this in case defendant makes a point. There might be a presumption I did not consider the patent valid.

By The Court: I assume that the defendant should produce before

the court—the right of the plaintiff to introduce any further evidence to overcome any possible doubt of the validity of the patent, that right is subject wholly to the discretion of the court.

By Mr. Goepel: After the defendant has rested his case?

By the Court: Yes. It may involve reopening the case on behalf of the defendant, but it is the proper course to pursue.

By Mr. Lane: I have no objection to their putting it in, so far as I am concerned.

By Mr. Goepel: I will make application to this court, in
73 view of that fact, in the event the defendant does not produce any proof, I may be permitted to produce these facts.

By the Court: You may make that application when that situation arises.

By Mr. Goepel: I reserve my right to do that.

Cross-examination.

By Mr. Lane:

16 X Q. What company are you working for at the present time?

A. New York Scaffolding Company.

17 X Q. The plaintiff in this case.

A. Yes sir.

18 X Q. For how long a time have you been engaged with that company?

A. In the scaffold business, I have been engaged in the scaffold business since 1804; with that company since 1809, December 1st.

19 X Q. And the New York Scaffolding Company has been putting out the same form of scaffold devices during all the time you have been connected with them?

A. No sir.

20 X Q. How did they differ, if at all, from the ones they are now putting out?

A. In 1909, when I went to work for them at first they put out overhead machines. Machines my father manufactured.

21 X Q. Were they putting out machines which worked from a scaffolding?

A. Not when I went to work for them first.

22 X Q. When did they start that?

A. I don't know as I can recollect; the first ones I seen were about two weeks after I started to work for them.

23 X Q. The latter part of 1909?

A. The latter part of 1909.

24 X Q. And been continuously selling them since that time—or leasing them?

A. Well, in 1909 when I started first we had very few—that is after I went to work around, very few, I think we most generally used what they cabled the Cavanagh machine until 1910; that is when we started to manufacture very largely and get them out in the country.

25 X Q. And you have been pushing them ever since that

time. The type you refer to is shown in this circular marked "Defendant's Exhibit 1"?

A. It looks like it.

26 X Q. That is it, is not it?

A. Yes sir.

27 X Q. Shown on pages marked in pencil 4 and 5?

A. Yes sir.

28 X Q. Also shown on page 6, is not it?

A. Yes sir, pages 4, 5 and 6.

29 X Q. And that is the type of scaffolding device that you have spoken of as being put out under your supervision during all that time?

A. Not all.

30 X Q. After the two weeks?

A. Yes sir, I worked on them sometimes and on the overhead sometimes.

31 X Q. The overhead is a type shown in the Cavanagh patent of your father's, which I now show you, of August 8, 1905, being No. 796807?

A. Yes sir.

32 X Q. Calling attention to that; that is a device by which the scaffold is supported from below, and they had outriggers at the top, and put the hoisting device, put a chain down——

A. Not a chain.

33 X Q. You used ropes, but chains are shown on this patent.

A. Yes sir.

34 X Q. Used ropes in place of chains?

A. Yes sir.

35 X Q. These devices were put out quite extensively under your father's patent, up to 1909, when the New York Scaffolding Company started with this other type, so far as you know?

A. Yes sir.

36 X Q. And the catalogue which I now hand you, with the name "The Patent Scaffolding Co." on the front of it, shows on pages 10, 11 and 13, the scaffold devices which you have been putting out for the New York Scaffolding Company, or under their direction?

A. Yes sir.

37 X Q. And in all of these devices which you put out for the New York Scaffolding Company since you have been connected with it, the hoisting devices were at right angles to the building in line with the putlogs as distinguished from right angles with the putlogs?

A. Not at all times.

38 X Q. All you remember of?

A. No.

39 X Q. You testified in the Pittsburgh case, didn't you?

A. No sir.

40 X Q. Who did testify in that case?

A. My brother. He is dead.

41 X Q. What percentage of the hoisting devices which you have personally installed for the New York Scaffolding Company were in line with the putlogs and at right angles to the building?

A. There are only special occasions when we turn the machines around and put wooden putlogs through. As a general thing they are put the other way.

42 X Q. Your general way is to have them at right angles to the building, as distinguished from flat wise?

A. Yes sir.

43 X Q. That has been the general practice of the company since you have been connected with it?

A. The general practice.

44 X Q. Will you please mention some of the principal buildings where this practice has been followed by you as a representative of the plaintiff here.

A. Which practice?

45 X Q. The general practice of putting these things at right angles to the building as distinguished from flatwise of the building?

A. I could name one hundred of them; but the young fellow that rigs the jobs didn't always give the name of the building.

46 X Q. Give us the largest ones.

A. Riverside Drive, buildings along there, along Fourth Avenue we have done that—in fact throughout entire New York and outside of New York.

47 X Q. On all these high buildings you used this with the putlogs and the scaffolding device at right angles to the building?

A. No.

48 X Q. Except in rare instances?

A. Sometimes on these buildings there is a close alley, in between the building we are rigging and the building next door, where the iron putlogs have to come off, and we fit a plank in the alley and turn the machines around.

49 X Q. In those instances how do you secure the scaffold devices to the putlogs?

A. We do not. Just lay the plank on the frame.

50 X Q. In those instances you make up a plank putlog and put them on the job?

A. Yes sir.

51 X Q. So you do not ship them as part of the scaffolding construction? What I mean is, when you use these putlogs in the hoisting devices that are flatwise of the building, you make the putlog on the job?

A. Yes sir.

52 X Q. But in the instances where you have them at right angles, you ship the things complete?

A. Complete.

53 X Q. Do you know what type of machines is called the Murray type, in your practice?

A. The Murray type is a overhead machine.

54 X Q. Do you know what the patent marking is on the ma-

chines that are installed by you for the New York Scaffolding Company?

A. I never looked.

55 X Q. There is a patent marking on them?

A. There is a brass plate on the side which I never looked at.

56 X Q. Is that on the samples you just produced?

A. I don't know.

57 X Q. I wish you look and find out. That is important, I think.

Defendant offers in evidence the catalogue of the Patent Scaffolding Company which the witness has referred to as showing the scaffolding devices which are put out by the New York Scaffolding Company, and with which he is familiar, as "Defendant's Exhibit No. 2."

The offer is only to the pictures shown to the witness.

58 X Q. Is this a catalogue that was put out by your company as illustrating the construction which you are selling?

A. I don't know whether our firm puts them out or not. I am not interested in any other.

Objected to, encumbering the record.

59 By Mr. Lane: Can't you admit that is a thing put out by your licensees?

Catalogue offered in evidence, it being admitted it was put out by the plaintiff company.

Received and marked "Defendant's Exhibit No. 2." Defendant offers in evidence the Cavanagh patent of August 8, 1905, No. 796,807, identified by the witness.

Marked "Defendant's Exhibit No. 3."

By Mr. Lane: Do you admit this is a catalogue published by the New York Scaffolding Company?

By Mr. Goepel: From 1912, on, yes.

Catalogue offered in evidence and marked "Defendant's Exhibit No. 4."

59 X Q. The machines I have called for are here, and the label on them which you have referred to reads as follows does not it? "Property of the Patent Scaffolding Company of Illinois, U. S. A. Machines rented not sold. Patent No. 854,059, May 28, 1907. Machine No. 425."

A. There is a brass label on them. That is the first time I ever read it.

60 X Q. Read into the record just exactly what appears.

By The Court: The machine is here, we can all read it.

61 X Q. The machine you have referred to as having been used

by the New York Scaffolding Company and generally since you came with them, December 1909, are here in court?

A. That is part of the machine.

Plaintiff offers in evidence the two U-shaped frames in court, produced by the witness, and ask that they be marked "Plaintiff's Exhibit No. 15.

(They are so marked.)

62 X Q. If I understand you correctly these machines are placed sidewise to the building—at right angles to the building as I now hold them, and a putlog put on the bottom member, and also extending at right angles to the building—to that putlog—and then the boards are put on top of the putlogs lengthwise of the building?

A. Yes sir.

63 X Q. And that is the way they are always put in in general practice?

A. In general practice.

64 X Q. And the putlogs have been made in two parts, have they not?

A. In two parts.

81 64 X Q. And bolted or riveted together?

A. Bolts put through them.

65 X Q. That is, the lower member of the hoisting device was put beneath the bolts in the putlogs?

A. The bolts in the putlog rests on the bottom of the frame there.

66 X Q. When was the first time that you saw one of these devices in use in the way you have just mentioned?

A. In use on a building?

67 X Q. Yes sir.

A. About two weeks before christmas 1909.

68 X Q. Had you seen the devices themselves prior to that time?

A. Seen parts of them.

69 X Q. That is the first time you became acquainted with them?

A. Yes sir.

70 X Q. Just a little before you became connected with the New York Scaffolding Company?

A. That was after.

71 X Q. About the time?

A. Yes sir.

72 X Q. How much after?

A. December the 1st is when I went to the company, and just before christmas 1909 when I seen parts going around.

73 X Q. The type of machine you say you saw in 1904, one of the types, is shown in this patent No. 673,384, of May 1901?

A. That is a Clarke scaffold. It is the bar scaffold.

Patent No. 673,384 offered in evidence and marked "Defendant's Exhibit No. 5."

74 X Q. Do you remember when your brother entered the employ of the New York Scaffolding Company?

A. When he first started?

75 X Q. Yes sir.

A. I could not just exactly state. It was after I started, I think.

Redirect examination.

By Mr. Goepel:

75 R. D. Q. When was the first time that you ever rigged U-shaped frames, like these exhibits?

A. Not until about February, 1910.

75 R. D. Q. And from that time on to the present time, how are these frames shipped from the factory to the place where they are rigged?

A. They are all apart.

77 R. D. Q. You mean the frames are separate, the putlogs separate?

A. Frames and putlogs, shackles, shoe—all the different parts are all sent separate.

78 R. D. Q. Then, when you get these frames and putlogs to the place where the machines are to be used, how do you install them?

A. To install the machines we have to set our outriggers first. When we go to the floors where the brick is to be laid, our machines are most generally found on that floor. We have to lay each drum side by side along the face of the building, then take our putlogs, take two bolts out of one end and slip our putlogs through the frame of one drum, bring it over to the other drum, then put the bolts in at.

79 R. D. Q. Are the bolts that pass through the two putlogs and sit on the U-shaped frames tightly drawn?

A. No.

80 R. D. Q. How are they?

A. They are put in loosely to give it hinge connection.

81 R. D. Q. And what are the advantages of this hinge connection?

A. By having both drums loose on the putlog you can raise one drum at least a foot to 16 inches higher than the other, the drum will still set parallel, and let the cable ride straight across the drum.

82 R. D. Q. Why is it necessary to have the cable ride straight across the drum?

A. To protect our cable.

83 R. D. Q. How protect the cable?

A. If the cable does not ride straight backward and forward across the drum, one will ride across the other, on top of the other and crush our cable.

84 R. D. Q. You mean the top layers on the drum will lie on the bottom cable of the drum?

A. Not at all times. That don't take all the cable off, the bottom layer might be straight, but as you wind up one layer will cross the other if not hanging straight.

85 R. D. Q. What is the effect of the cables crossing each other when under tension?

By the Court: He has explained that.

86 R. D. Q. Is there any danger of the cable rubbing against the cheeks of the drum, and what effect if any would that have upon the cable?

83 A. If the cable is rubbed, it would break the strand of the cable.

87 R. D. Q. Is it usual for the cable to rub against the cheek of the drum, when drums are used like this exhibit you have before you, when connected in the manner described by you, with the hinge connection?

A. Never.

88 R. D. Q. In the case where the U-shaped frames are arranged broadside to the wall of the building, what can you say about the action of the cable on the drums when the drums are wound up or let down; is there any danger then of the cable overlapping on the drum, or touching the cheeks of the drum, when the U-shaped frames are arranged broadside, and the putlog is in the U-shaped frame?

Objected to as leading.

A. You mean in the alley? No, the drum will go back and forth.

89 R. D. Q. Why will it go back and forth?

A. There is nothing there to hold them, they will wiggle back and forth as the scaffold is raised either one side or the other.

90 R. D. Q. In actual practice does it happen that one end of the platform is higher than the other?

A. Yes, at times I have seen a scaffold, one end would be on the seventh floor and the other end on the sixth floor?

91 R. D. Q. And those scaffoldings have a large number of U shaped drums (frames) arranged in pairs?

A. In pairs along the face of the building.

92 R. D. Q. What is it that permits one end of the platform to be so much higher than the other end of the platform?

A. The narrower putlogs.

93 R. D. Q. And in what way are the narrow putlogs advantageous in this direction, as you say?

A. With the narrow putlogs we can always lay the scaffold six or seven inches higher than the following machine without opening up the gaps in the planks.

94 R. D. Q. Is it usual to have the platform itself or the putlogs absolutely horizontal? Is it usual to have the platform itself in the direction of the putlogs, absolutely horizontal?

A. No.

95 R. D. Q. What is customary?

84 A. I can't quite catch it.

96 R. D. Q. We were speaking before about the length of the platform. Now I am asking you in the direction of the putlogs if it is customary to have them horizontal or not.

A. It all depends. Some of the masons like the scaffold two

three inches higher on the outside than the inside; it gives them a better chance to lean towards the wall.

97 R. D. Q. In what respect does the hingeing connection permit the tilting of the putlog?

A. You can raise the outside drum three inches higher than the inside without throwing the outside drum out of level.

98 R. D. Q. Just what do you mean by throwing the drum out of level?

A. As you raise the outside the machine won't tilt from side to side and make the cable ride unevenly.

99 R. D. Q. You mean the hinge connection permits the cable to ride easily on the drum?

A. Exactly.

100 R. D. Q. If the putlog was entirely rigid, would that be possible?

A. You would have to raise both drums at the same time.

101 R. D. Q. On the winding of only one?

A. On the winding of only one complete machine.

102 R. D. Q. Now you spoke of the Cavanagh overhead machine. What are the disadvantages of that machine compared to the platform type with the hinge connection, as you testified?

A. The overhead machine my father owned, oftentimes the cables would not ride straight. The men on the platform could not see what, and as the two drums worked on one shaft the platform would get out of level, and they would have to send to our factory for one of our men to level the scaffold. The overhead machine the masons did not like, because there was a weight up over their heads, they could not see the working part; if anything went wrong they would not know until they got a bounce, or something broke. That is one reason they liked the platform better than the overhead machine.

103 R. D. Q. When they desired to level the platform, what did they have to do on the overhead machine?

A. To level the platform we had to put in a dog, or pawl that would hold the drum still; then we would have to take the pin out of the drum, which would let one drum move while the other stayed still. The man on the platform would have to pull on a rope which would only move one end of the putlog, until the scaffold became level again.

104 R. D. Q. What if any were the disadvantages of the rope hanging down from the overhead machine to the platform?

A. The rope hanging down in front of the building on windy days would all become twisted, snarled and tangled with each other.

105 R. D. Q. Before you wound up the drums what was necessary, and how much time did that take?

A. Sometimes it would take an hour and a half to get all the ropes in condition to work again.

106 R. D. Q. About how heavy were these overhead machines?

A. 335 pounds.

107 R. D. Q. Were the drums loosely or fixedly connected to the outrigger?

A. The drums were set on the outrigger.

108 R. D. Q. Fixedly?

A. So we could push them in or pull them out.

109 R. D. Q. What were the criticisms made of this overhead drum type when you first put them on the buildings?

A. The masons and superintendents thought when we put such a heavy structure on top of the building it would pull the iron frame out of level. Some imagined it would pull very light buildings over.

110 R. D. Q. D-d you have any difficulty at that time in putting structures like that on the buildings?

A. At first we had to let our machines on buildings as trials. In other words, put them on for nothing.

111 R. D. Q. By "our machines" you mean the overhead type?

A. Yes sir. I mean we would have to fix a price with the builders, give them the machines on the condition when the job was through, if they were satisfied with them they would pay us that price; if they were not satisfied it was not to cost them anything for the scaffold.

112 R. D. Q. How long a time did this condition exist?

A. The first year we were in business—tried to get in business. We had two or three jobs at that time.

113 R. D. Q. That was 1904, as you stated?

86 A. 1904.

114 R. D. Q. Did it ever happen that the cable overlapped during the winding of it, on the overhead type of machine?

A. I remember cases where the cables coiled up on the cheek of the drum—got on top of each other, they gave four or five turns, I remember, and they would fall over quickly. Oftentimes when they done that the bricklayers would pick up their tools and go off the job—a sudden fright they would get when the scaffold dropped.

-15 R. D. Q. About how many stories high did you see it that the men had to crawl out in order to repair or look after the overhead type of machine?

A. Eight stories.

116 R. D. Q. Was it possible to do any cornice work on buildings with the overhead type of machine?

A. Not with the machine. It was necessary to pull the machines in.

117 R. D. Q. Will you please briefly describe the structure of these machines you first installed in 1910, which used as you say frames?

A. The first machines I installed were machines that came on the job, two drums, putlogs, anchor bolts and outrigger, all apart. It was necessary for us to put our outriggers on the roof of the building, then to go down on the second floor, but our machines together, pull up our cable through our outriggers, put a bolt through the shackle where the eye of the cable fitted in and lay the machines out in front of the building ready for the masons to put their plank on.

118 R. D. Q. And in these cases of the U-shaped frame platform, on what did the putlogs rest?

A. On the frame.

119 R. D. Q. What are the advantages of the U-shaped hinge connection type, which rests on the frame, as you say, over the overhead type?

A. The U-shaped frame machine would never get out of level, that is they could work it either two inches high or low up the face of the building. The machine was always in front of the mason and bricklayers, they could always see it, at all times when working, that made them safe and secure; they didn't have to look up overhead.

120 R. D. Q. To what are these U-shaped frames with hinged connection now used?

57 A. Very near all the buildings being put up throughout New York state, so far as I know.

121 R. D. Q. Do you go out of New York state sometimes?

A. Quite often.

122 R. D. Q. To what states?

A. Boston, Montreal, Philadelphia, Washington, Baltimore, all down through Connecticut.

123 R. D. Q. And in these other states to what extent are the U-shaped frames with hinged connections used, so far as the rigging is concerned?

A. Very near all places, up through Connecticut, and buildings going up in Philadelphia, won't use anything else but our machine.

124 R. D. Q. You were shown pages 4, 5 and 6, marked in lead pencil on the top of the page of defendant's exhibit 1. I call your attention specially to pages 4 and 5, and ask you to state if you can whether the frames are connected to the putlogs in those figures rigidly or loosely?

A. I cannot tell by the picture.

125 R. D. Q. And you were asked about the markings on the machine that was produced, and the number that appeared as No. 654,959. Did you at any time ever see on the market an adjustable scaffold exactly like that patent drawing?

A. Never.

126 R. D. Q. And in 1910, when you first became connected with the plaintiff, at the end of 1909 and before that time, were you in a position to see devices, scaffold devices in the market?

A. Any device that was used in New York.

127 R. D. Q. And before 1909, in 1904, you were engaged in the scaffolding business?

A. Yes sir.

Recross-examination.

By Mr. Lane:

128 R. C. Q. Do you mean to say you are familiar with scaffold devices of all kinds prior to the time you went to the New York Scaffolding Company, and never saw any devices of that kind on the market prior to the time?

A. I have never seen any device like that until the latter part of 1909.

129 R. C. Q. Don't you know as a matter of fact that device was on sale, or being leased as early as 1908?

88 A. No sir. There are things in one end of the city we don't see on the other end.

130 R. C. Q. These things might have been on the market without your seeing them, as early as that?

A. Yes sir.

By Mr. Goepel:

131 R. C. Q. You did not see them until the time you testified to in your direct and cross-examination?

A. No sir.

By Mr. Lane:

132 R. C. Q. Your knowledge was not such as allowed you to know whether this was being sold or not at that time?

A. Yes, if there were anything that came out in the lists, I would know.

133 R. C. Q. You said you did not know what was going on in the other part of the city. How do you know this device was not being sold in 1908?

A. That I don't know.

Testimony of Alfred W. French.

ALFRED W. FRENCH, called by plaintiff, being sworn, testified:

Direct examination.

By Mr. Goepel:

1 Q. What is your age and residence?

A. Forty years of age. My residence is 9412, Longwood Boulevard, Chicago.

2 Q. Did you ever see in Chicago any scaffold machines that were known as Henderson Scaffold devices?

A. Yes sir.

3 Q. And when?

A. In Chicago in 1911.

4 Q. To what extent were they used in Chicago during 1911?

A. Practically every building that was hung with scaffolds were hung with that type of machine.

5 Q. Did you at any time examine these machines that were known as the Henderson machines?

A. Yes sir.

6 Q. Will you please briefly describe them?

89 A. The machine known to us as the Henderson machine consisted of a drum mounted in a U-frame with—some had pinion drive or gear drive, some had worm drive—worm gears.

7 Q. In what manner were the putlogs, if any, arranged with respect to the U-shaped frame?

A. Each drum were hung from an outrigger, in pairs, broadside to the building having a wooden putlog placed loosely through the U-frame.

8 Q. To what extent were these machines, as you have described, used in Chicago in the year 1911?

A. They were practically the only machine used on buildings where the standard scaffold was used.

9 Q. And about that time, or shortly before, do you know who put those machines on the market? Those machines known as the Henderson machines on the market in 1911, as you saw them that year?

A. I understood they were put on by the Henderson Company, or a company known as the Henderson Company.

10 Q. Did you examine any of the frames or other parts of these machines carefully?

A. Yes sir.

11 Q. Did you find any plates on those machines having any marking in respect to patents they were on?

A. There were no plates on the machines that I examined.

12 Q. What is your present line of business, and what has it been during the last few years—two or three years?

A. I am in the contractors' equipment business—that is contractors' machinery equipment.

13 Q. And do you compete in any manner with one Egbert Whitney?

A. Yes sir.

14 Q. In what way?

A. In the renting of scaffold machines.

15 Q. Have you lost any contracts for the renting of scaffold machines, in which you competed with Egbert Whitney?

A. Yes sir.

16 Q. And after you lost such contracts, what kind of machines did you see on the buildings for which you competed?

A. The machine known as the "Little Wonder," in the last three years.

17 Q. In what way were these machines installed on the buildings when you saw them?

A. The machines were installed similar to ours, as far as the combination of hoisting devices, outriggers, cables and clamps are concerned.

18 Q. And in what way were the machines on these jobs that you said you lost, arranged with respect to the wall of the building?

A. The hoisting device on the machines was placed broadside to the building.

19 Q. What about the frame for the hoisting device?

A. The frame was placed broadside to the building.

20 Q. And in what respect were the putlogs arranged with respect to the frames of the hoisting devices?

A. Well, the putlogs ran through the frame, connecting one frame to the other.

21 Q. And on the putlogs?

A. The scaffold frames were supported on the putlogs. Those form a platform.

22 Q. Were there any cables connected with the hoisting device, or were the hoisting devices connected with any cables, and in what way were those *calves* suspended?

A. The cables were secured to the outriggers, or suspended from the outriggers and passed down through the hoisting device, on the machine.

23 Q. And in what manner were the putlogs connected with the frames of the hoisting devices.

A. Some of them were laid loosely through, just having a hole to allow the cable to pass through. Others were thro' the frame in a similar manner, only the putlogs being somewhat wider than the frames—that is the bars, or spacing of the bars that form the frame—so that the putlogs had holes bored through them to allow rods to pass through.

24 Q. Were those rods tight or loose with respect to the holes in the putlogs?

A. Loose.

25 Q. In what manner did the putlogs work in connection with the frames of the hoisting devices when one or the other of the hoisting devices was raised or lowered?

A. The hoisting devices remain perpendicular while the putlogs would slip or slant up and down, according to which machine is raised or lowered.

26 Q. What was the relation between the cable and hoisting device, when one or the other of the hoisting devices was raised or lowered?

A. The cable was perpendicular.

27 Q. Perpendicular to what?

91 A. To the face of the building. Perpendicular from the ground level.

28 Q. Was the cable perpendicular or otherwise with respect to the frames of the hoisting devices?

A. They were in line with the machine. Or, in other words, the machine would tilt to keep in line with the cable.

29 Q. Where did you see machines of the kind that you describe, and arranged in the manner that you have described?

A. Why, I have seen them in a number of different cities.

30 Q. Please mention them, and give the dates when you saw them. Give them from your own memory if you can.

A. In 1914.

31 Q. And where?

A. One on the Y. M. C. A. building in Grand Rapids, Michigan.

32 Q. And do you remember any others?

A. Yes sir.

33 Q. Please state them.

A. In Columbus, Ohio, in Omaha, in Lincoln, Nebraska.

34 Q. And how many of these different jobs did you see before June 1915?

A. Practically all of those jobs.

35 Q. Did you see any other machine that was put on buildings of any jobs that you lost, in which you competed with Egbert Whitney, and how were those machines known—by what names?

A. I have seen a machine known as the Whitney scaffold hoist machine on several jobs.

36 Q. Where and when?

A. In Chicago, on the Bell Telephone Building.

37 Q. Anywhere else?

A. I cannot just recall now the buildings they were on, but I have seen them on several.

38 Q. About when?

A. Well, the first machines I remember seeing was in 1911.

39 Q. And in what manner were these Whitney hoist machines arranged with respect to the wall of the building?

A. They were arranged broadside to the building.

40 Q. Please state briefly *who* these Whitney hoist machines were installed in the jobs that you lost?

A. They were installed with outriggers projecting over the building or out from the floor levels being suspended on cables, having a wooden putlog slipped through the U-frame which supported the platform or scaffold planks from which the men worked.

92 41 Q. Was the connection between the U-shaped frames and putlogs rigidly or loosely?

A. Loosely.

42 Q. Will you please produce some machines that you speak of as being Little Wonder machines?

A. I have some here.

43 Q. Will you produce the Little Wonder machine?

A. Yes sir.

Plaintiff's Counsel offers in evidence the Little Wonder machine and asks that it be marked "Plaintiff's Exhibit 16."

Received and so marked.

44 Q. Will you please describe briefly, with the aid of this exhibit, just how the frame is arranged, and putlog arranged in respect therewith?

A. If this were the building line, the machine was set the same as this machine, broadside to the face of the building, having a wooden putlog passing through the frame, extending to the other machine, connecting the two machines together, forming a support for the platform.

45 Q. And on what did the putlog rest?

A. The putlog rested on the bar forming the bottom portion of the frame.

46 Q. How was the machine worked, or raised or lowered?

A. The machine was operated with a handle or lever.

47 Q. Point it out.

A. Just slipped on over this to give more leverage to operate.

Mr. Goepel: Just give it a few turns. (Witness does so.)

48 Q. The Whitney Scaffold Hoist Machine, briefly describe that in relation to the model you have in your hand, which is Plaintiff's Exhibit 16.

A. The Whitney Scaffold Hoist machine is similar to some extent, having a rope or cable hanging loose from the machine—meaning the portion below the platform.

By Mr. Lane:

49 Q. In the Whitney Scaffold Hoist Machine there was a drum similar to the one you have on the device you have before you—wound up similar to that?

A. In some respects, but the drum don't contain all the cable that was wound up.

50 Q. The cable dangled down just like in the Little Wonder?

A. Yes sir.

51 Q. I show you plaintiff's exhibit No. 4 and ask you how nearly like the description that you made about the Whitney Scaffold Hoisting Machine is the picture on Figure 1? How
93 nearly like this device in this patent 998270 was the Whitney Scaffold Hoist device about which you have been testifying?

A. As nearly as I can tell from the picture, from the drawing, the picture, it is the same.

52 Q. And in answering that question you also looked at figures 2, 3, 4, 5 and 6 found on sheet 2 of that same patent?

A. Yes sir.

53 Q. I show you a photograph and ask you how nearly like the machines that you identify as Whitney's Scaffold Hoist machine, the machines were that are shown in that photograph?

A. Practically the same machine.

54 Q. Please state briefly how these machines, or machines like those shown in this photograph, worked, and how they were arranged. The photograph shows a pair with the putlog passing through. How were others like that arranged? State briefly.

A. Arranged in the same way, with the putlog passing through the frame of the machine which were hung broadside to the building.

55 Q. In other words, first an outrigger, and sets of outriggers at the upper part of the building, from which cables are suspended, and these cables pass through these frames? Is that right?

A. Yes sir.

56 Q. And these frames arranged broadside to the wall of the building as you have testified?

A. Yes sir.

57 Q. And the putlogs pass through the frames, and they are arranged at right angles to the wall of the building?

A. Yes sir.

58 Q. And what is arranged on the different putlogs of the different pairs of machines?

A. The plank that forms the platform.

59 Q. State how these machines are operated when you want to raise or lower the platform.

A. They are pumped, the same as a well pump.

60 Q. How nearly like the Little Wonder that you described before?

A. In some respects they are the same, in others they are different, having a drum which the cable is encircled around. Whereas, the Little Wonder has a clutch only.

61 Q. The photograph you have in your hand has also a clutch above the drum?

94 A. Yes sir.

62 Q. That corresponds with the upper clutch in the Little Wonder machine?

A. Yes sir.

63 Q. How is the cable wound around this drum in respect to clamping devices you see on the photograph?

A. There is several reels—or in other words, the cable is wrapped around the drum three or four times, letting the last end dangle to the ground, or towards the ground.

64 Q. Those machines that you testified about that you saw in 1911 and the years you mentioned and places mentioned, known as the Whitney Scaffold Hoist machine, they had a brake-shoe at the end of the pumping lever, did they not?

A. Yes, a brake-shoe or some device that clamped the cable to the drum while the drum was revolved.

65 Q. So when you moved the pumping lever you pressed the brake-shoe against the cable on the drum, and rotated the drum so as to wind up the cable on the drum. Is that right?

A. Yes sir.

66 Q. As you carried out this pumping action you turned the drum and caused the hoisting device to move up on the cable, and of course the other end of the cable would dangle down from the pump? Is that tight.

A. That is right.

By Mr. Goepel: I offer this photograph which was testified to by the witness, as Plaintiff's Exhibit 17.

(It is so marked.)

(Noon recess.)

2 p. m., May 29th, 1916.

Direct examination of the witness Alfred W. French resumed.

By Mr. Goepel:

67 Q. When did you first see machines like the Henderson machines that you described this morning?

A. I first saw the Henderson type machine on the Brotherhood Building in Cleveland, Ohio.

68 Q. And when?

A. It was in 1910.

95 69 Q. About that time you were in the contractors' supply business?

A. Yes sir.

70 Q. And were any catalogues sent to contractors about the Henderson machine, that you received?

A. I don't remember ever receiving one; but I have seen the Henderson catalogue.

71 Q. Is that the one that I hand you, called the Henderson Scaffold Hoist Company?

Objected to as irrelevant, incompetent and immaterial, and hearsay.

Objection overruled. Exception.

By the Court: You may answer. I do not quite see the purpose of the examination.

By Mr. Goepel: The object of the catalogue was to show that the contractors were taught how to use them in this way, namely, the broadside, with the putlog passing through, and show also the machines themselves by the Henderson Company, the predecessor of the New York Company so in use by that company would inure to the subsequent assignee of the patent, or inures to the benefit of the successors.

Objected to as secondary evidence.

Objection overruled. Exception.

By the Court:

72 Q. What is this? Is this one of the catalogues you saw, if you saw any?

A. This catalogue, yes sir, I think is one of the catalogues I saw. I saw a catalogue that looks the same as this.

73 Q. Will you please examine that catalogue and state how nearly like the pictures shown therein, the scaffolding devices that you saw in Cleveland in 1910, and Chicago in 1911, were arranged which were shown as you said, by the name of the Henderson type of scaffold?

Objected to. Objection overruled. Defendant excepts.

By Mr. Lane: The objection I make is to putting before the witness a circular which of course suggests that answer he expected to get from him.

A. The machines that I saw of the particular type mentioned, were like the machine shown in this catalogue, with the exception that the working mechanism was a gear and ratchet, in place of worm and worm gear.

74 Q. To make this matter clear: you are now referring to a page called page 3—the worm gear?

96 Witness: I think I made a mistake. Change that to gear and pinion.

75 Q. How about the general arrangement of the machines as shown on the other pages?

A. The machines were arranged in the same way as the drawings on the opposite page marked No. 3.

76 Q. The drawing itself is marked No. 3. How about some of these other pages, about the arrangement of the machine?

A. They appear to be arranged in the same way—yes.

77 Q. Do some of the pages of this booklet refresh your recollection as to some of the buildings that you saw rigged?

A. The picture of the erection of the Boston Store is familiar. I saw the machines used on parts of the building, but could not swear that I saw them on the particular part that is shown on this picture.

78 Q. Any others?

A. I saw the machines on the Sherman House at different times in its construction, in Chicago.

79 Q. How about the Griffiths?

A. I saw Griffiths use the machine on several buildings in Chicago, and lately on the Union League.

80 Q. When you saw them lately, how much were they like the pictures you have in your hand?

A. They were the same machine as marked No. 3 in this catalogue.

81 Q. How about the use, the arrangement of the platform and putlog?

A. Machines were erected broadside to the building, having a working putlog slid through the U-frames upon which the scaffold planks were supported.

82 Q. Does the printed letter about Griffiths in that catalogue refresh your recollection as to when you first saw Griffiths use them?

A. The Sherman House job——

By the Court: Does it refresh your recollection as to when you say the Griffiths use them? Are you able to fix from that booklet the time when you saw them?

A. I saw them several times, but I can't recollect the date.

83 Q. Does the date in this Griffiths letter in any way refresh your recollection as to the date?

Objected to as leading and suggesting the answer.

Overruled. Exception.

97 A. No. It does not.

84 Q. What was used in Chicago before you saw these Henderson machines?

A. They were the timber outlook scaffolds, and also the bar scaffold, or what they call strap hangers.

85 Q. To what extent did these devices of Henderson supplant these types you have spoken of?

A. It is rare you ever saw a strap-hanger used in the last three or four years. Most all jobs that are scaffolded with the exterior scaffolds are equipped with the Henderson type of machine.

86 Q. And when you first saw these scaffold devices of Henderson, what way did you think—were they an improvement over the bar type and timber type?

Objected to by defendant as incompetent, irrelevant and immaterial.

Overruled. Exception.

A. It struck me they had many advantages over the bar type or strap-hanger type of scaffold.

87 Q. Please state briefly the advantages.

A. One advantage that the scaffold could be raised without disturbing the bricklayers, and enable the bricklayers to lay the brick—

By the Court: I don't think there is any dispute as to the advantages of this type over the old type of scaffolds.

By Mr. Lane: There is no contention at all this introduced as one of the plaintiff's manufacture has advantages over the outrigger where you lift from the top of the building. The only contention I make is there is no advantage of Henderson as shown in the Henderson patent, over what was done by this plaintiff long prior to the application for a patent.

By Mr. Goepel: Then I understand that you substantially concede the advantages of the platform type of machine over the bar type, like the one shown in the Henderson catalogue.

By Mr. Lane: I won't admit that.

88 Q. You were asked to state briefly the advantages of the Henderson type of scaffold device, as you described it and as you saw it on the market in 1910 and 1911, over the bar type or strap type and the other types you said were on the market before that. Please state briefly these advantages.

98 By the Court: Whatever they were the Patent Office recognized them by granting the patent.

By Mr. Goepel: I will not press it.

By Mr. Goepel: I offer in evidence the catalogue of the Henderson Scaffold Hoist Company, and ask that it be marked No. 18.

Objected to as not being properly proved, and incompetent and immaterial.

Received subject to the objection. Marked "Plaintiff's Exhibit No. 18."

89 Q. You testified this morning of the Whitney Scaffold Hoisting machine. I ask you how near the machine you testified about is like that protograph?

A. Yes sir, the same.

Photograph offered in evidence and marked "Plaintiff's Exhibit No. 19."

90 Q. How did the lever work in Exhibit No. 19?

A. Worked the same as the pump handle.

91 Q. And when not in use, what was done with the lever?
When not pumping, what was done with the lever?

A. The part shown here was left on the machine.

92 Q. Was it left in the path of the workmen or not?

A. It was in the path of the workmen, yes sir.

93 Q. Could it be held vertical or brought up toward the frame of the drum?

A. No, I think not.

94 Q. I hand you another photograph and ask you to state briefly what that is.

Objected to as secondary evidence, an improvement of the machine known as the Little Wonder.

Marked "Plaintiff's Exhibit No. 20."

Objected to as incompetent and irrelevant, not traced in any way to the defendant.

A. That is a picture of the same machine.

95 Q. In what way is it different?

A. The one machine is hoisted higher than the other.

By Mr. Goepel: I offer in evidence this photograph.

Marked "Plaintiff's Exhibit No. 21."

Objected to as incompetent, irrelevant and immaterial, not traced in any way to the defendant.

Received. Exception by defendant.

96 Q. In what way do these photographs Plaintiff's Exhibits Nos. 20 and 21, show the way the Little Wonder machines are

99 rigged in respect to the putlogs, in the installation, you testified this morning, of the jobs you lost in competition with Whitney?

A. They are rigged in the same way having the putlog run thro' the machine—through the frame of the machine.

97 Q. In what way are the putlogs arranged in respect to the walls of the building in the installation you said you saw?

A. Broadside to the building.

98 Q. The putlogs—in what way are the putlogs arranged in respect to the wall of the building?

A. At right angles.

99 Q. I hand you another photograph and ask you if you can state what that is—what it represents?

A. Little Wonder machine, with the covers off all the clutches.

Photograph offered in evidence by plaintiff and marked "Plaintiff's Exhibit No. 22."

100 Q. I show you a photograph with some putlogs and planks laid thereon, and ask you to state how nearly like the planks that you see on those putlogs, the planks were arranged that you saw in the installations of Whitney?

A. In the same way.

101 Q. To what extent is that installation like those in general

use so far as the putlogs and planks are concerned? Is it the same or different?

A. By which machine?

102 Q. Any machine.

Defendant's Counsel: General use, is the question, in general use.

103 Q. The questions was just to the planks and putlogs.

A. In the same way.

104 Q. That is the general way?

A. Yes sir, in the same way.

105 Q. Supposing one of those putlogs would be raised higher than the neighboring putlog, then when you have the planks on the putlogs, what then would happen?

A. It would tend to open the joints at the lap of the planks, make one of the planks stick up.

106 Q. What advantage is there in the width of a putlog, in respect to the opening up of the laps of the planks when one of the neighboring putlogs is raised higher or lower than the adjacent one?

100 A. The narrower the putlog the smaller the opening in the plank where they are spliced.

107 Q. By splicing you mean overlapping?

A. Overlapping.

108 Q. When you have in a scaffold all the different parts of the platform throughout the length of the platform raised equally throughout its length, or lowered equally throughout its length, does the width of the putlog make any difference then?

A. No.

109 Q. In that case the broadside rigging is just as efficient as when the U-shaped frame is at right angles to the wall of the building?

A. Yes sir.

110 Q. Is it common or not common to have one end of the wall raised by the bricklayers or masons, quicker than another part of the wall?

A. Quite frequently you see a scaffold when in use on a building, when some portions of the scaffold is practically a story higher than the other portions.

111 Q. Does it happen also on these scaffold devices that the platforms are raised at different heights—speaking now of the length of the putlog. We were just speaking about the length of the platform. Turn to the putlog itself. Does it happen that the machines are raised or lowered at different heights in respect to the end of the putlogs, so as to tilt the putlogs? Does that happen?

A. Yes sir.

111½ Q. Frequently, or infrequently?

A. Frequently.

112 Q. What can you say about the use of these U-shaped frames like this one which is plaintiff's Exhibit No. 15, during the last two or three years, in the construction of high buildings?

A. The U-shaped frame machine with the loose connection, en-

ables the operator to raise the scaffold machines one at a time, allowing the putlogs to tip or hinge over the support of the U-frame, leaving the machine standing erect at all times.

113 Q. What can you say as to the extent of the use of devices of the kind you have just described?

A. They are used practically on all large buildings.

114 Q. Just to make a point clear about the bar type and timber that you spoke of as having been used and seen by you before the Henderson type came into the market; were those bar type and timber type scaffolding devices also used on the high buildings?

A. The timber type, or outlook scaffold were used on high buildings.

115 Q. How about the bar or strap type which has been referred to as the Clarke, the bar or strap type machines.

A. The bar or strap type machines I never saw used on buildings over four or five stories.

116 Q. In the timber type, things like the horses &c. were loosely connected?

A. On the timber or outlook machines, the scaffold plank were laid over the outlook, and the horses set loosely on the platform, having platform on top of the horses from which the bricklayers worked.

By Mr. Goepel: I offer in evidence this last photograph that the witness spoke about, as "Plaintiff's Exhibit No. 23."

Cross-examination.

By Mr. Lane:

117 X Q. How long have you been in the scaffolding business?

A. I have been in the equipment business, handling contractors' equipment and scaffold combined about 15 years.

118 X Q. How long have you been connected with the Patent Scaffolding?

A. French & Allen, of whom I am one of the firm, have been agents for the Patent Scaffolding Company for three years.

119 X Q. Have you been longer than that?

A. No.

120 X Q. When did you first know of scaffolding devices substantially like "plaintiff's Exhibit No. 15"?

A. In 1910.

121 X Q. That was the first time you ever saw them?

A. Yes sir.

122 X Q. And where were they used at that time?

A. In Cleveland.

123 X Q. Is the Patent Scaffolding Company from whom you lease your machines, if you do lease them, licensed by the New York Scaffolding Company?

A. They have a connection with the New York Scaffold-

102 ing Company, but I could not say they are licensees. I don't know.

124 X Q. Are you connected with the Patent Scaffolding Company in any way?

A. Only as an agent.

125 X Q. You are not an officer, director, or own any stock in it?

A. Not any.

126 X Q. Who are the officers of that company in Chicago?

A. Mr. Langley and Mr. McComber, I guess.

127 X Q. Prior to 1909, what form of scaffolding devices were used to your knowledge, which elevated the platforms from the scaffold itself?

A. I never saw one.

128 X Q. Were you in that business at that time?

A. I was in the equipment business which puts me in touch with building work in contracting.

129 X Q. Did you distribute any of these circulars known as "The Patent Scaffolding Co. Circulars" in evidence as Defendants' Exhibit No. 2, in connection with your business of handling these scaffolding devices? You are pretty familiar with that book?

A. Yes, we distributed those books.

130 X Q. For how long?

A. Only a short time.

131 X Q. Three or four years?

A. No, part of a year.

132 X Q. When did you start putting them out? I see this is dated August, 1912. Did you start about that time?

A. Yes, sometime in 1912. About the beginning of 1912.

133 X Q. Is this statement in this book which you were circulating true? "We believe, and the leading architects, engineers, builders and insurance companies confirm our opinion, that many of the fatalities in modern construction work can be eliminated through the use of safety scaffolding. We have no statistics to show the number of lives which the ever increasing use of our scaffolding has saved during the period of more than five years since its introduction."

A. I don't know. I am not familiar with the Patent Scaffolding Company before that time.

134 X Q. So you do not know what they were putting out at that time, that is, prior to 1912?

A. No. The first machines I saw of that type was in 1911-1910.

103 135 X Q. So far as you know the statement contained in here may be correct?

Objected to as hypothetical.

By Mr. Lane: He is trying to convey the impression that these devices were not started to be put out until after the issue of the patent. Our contention is they have been put out continuously since 1907.

By the Court: He may answer the question.

Plaintiff excepts.

A. Yes.

136 X Q. So far as you know, the statement that these devices were in use more than five years prior to August, 1907, may be correct?

Objected to as hypothetical.

Sustained. Defendant excepts.

137 X Q. So far as you know, the identical devices which are here before you as exhibit 15, may have been on the market by the Patent Scaffolding Company and New York Scaffolding Company, for more than two years prior to August, 1912?

Objected to as hypothetical, asking the witness what he knows or don't know. He has stated when he first saw it, and that is as far as his testimony goes.

Sustained. Defendant excepts.

138 X Q. Do you have any knowledge of when the New York Scaffolding Company first commenced the manufacture and sale or lease of devices like Plaintiff's Exhibit No. 15?

A. I have not.

139 X Q. Were you selling or handling these devices like Plaintiff's Exhibit 15 at the time Mr. Henderson, according to you, was selling or handling his devices in Chicago?

A. I don't catch your question.

By the Court: Were you selling devices like that on the floor known as Exhibit 15—were you personally selling that type of device at the time the Henderson device was on the market as you have testified? It relates to your handling of that apparatus.

A. I sold a similar type.

140 X Q. That was in 1910?

A. 1910.

141 X Q. And you were in competition with Henderson at that time in the sale of that device?

A. Yes sir.

104 142 X Q. Do you know anything about a suit that was brought by the New York Scaffolding Company under the Murray patent, against Henderson, in Chicago, during the time you were in competition with that Henderson device?

Objected to — incompetent, beyond the direct examination, and the witness has not said that he was connected with the plaintiff in that suit when he sold these devices.

Objection overruled. Plaintiff excepts.

A. No.

143 X Q. Never heard of that suit at all?

A. Yes, I heard of it.

144 X Q. What do you know about it?

Objected to.

By Mr. Lane: I am trying to show the relationship between the Patent Scaffolding Company and this Henderson device. As I understand the facts the plaintiff in this action started a suit against Henderson to enjoin him from manufacturing these devices under the Murray patent. They at that time were manufacturing this form of device as I understand, so I want to prove his interest in that situation if I can.

Objection overruled. Plaintiff excepts.

By the Court: All right, let us see what he knows about it. Tell us what you know about it.

A. I just heard there was a suit against Henderson brought by the Patent Scaffolding Company.

145 X Q. And it was shortly after that suit was brought that the Henderson constructions went off the market, wasn't it?

A. I don't know. I don't know what time the suit was brought.

146 X Q. Shortly after 1911 the Henderson devices went off the market, those that were put out as Henderson put them out—did not they?

A. They are not off the market yet, so far as I know.

147 X Q. Where have you seen any of these Henderson devices, used as shown in that catalogue, on the market in the last four years?

A. We often rig up a machine in the same way now.

148 X Q. I am speaking of the device Henderson himself put out, and as put out by Henderson. Where are any of those
105 devices which Henderson put out under his patent, in use at the present time?

A. Through the South.

149 X Q. Where have you seen one, of your own personal knowledge?

A. In Birmingham, Ala.

150 X Q. You have seen it there?

A. Yes.

151 X Q. On how many buildings?

A. I just recollect one building now that I have in mind.

152 X Q. When was that?

A. 1912.

153 X Q. Not since that time?

A. Yes sir.

154 X Q. Just what was the device that you were putting out in competition with Henderson in 1911?

A. It was a drum type machine with a U-frame.

155 X Q. It was like this device Plaintiff's Exhibit 15 that is before you, was it?

A. Similar.

156 X Q. How did it differ?

A. Had a worm—had a gear and pinion in place of a worm.

157 X Q. Otherwise the same as that?

A. Practically.

158 X Q. For how long a time had you been putting that out in Chicago?

A. How long since?

159 X Q. No, how long prior?

A. About a year.

160 X Q. And what was your first connection with the New York Scaffolding Company?

A. As agent.

161 X Q. When was that? That you had the first connection with that company?

A. About the first of 1912.

162 X Q. That is the first time you ever came in contact with them?

A. No, that is the first time I ever represented them.

163 X Q. What was your first knowledge of devices that were put out—the first devices that were operated from the scaffold?

A. (Referring to Exh. 15.) A machine similar to this.

164 X Q. Is not it a fact prior to the first of January 1909, the New York Scaffolding Company were selling a device sufficiently like this, with the slight change you spoke of, being used in scaffolding?

A. Not to my knowledge.

165 X Q. Do you know what they were doing at that time?

A. Yes, I know some things they were doing.

166 X Q. You don't mean to say the New York Scaffolding Company were not putting out devices like this prior to 1909, substantially?

A. Not to my knowledge.

167 X Q. Do you know?

A. I saw some of the machines they put out.

168 X Q. What?

A. They were overhead machines, all that I saw, prior to that time.

169 X Q. In the Whitney Scaffold Hoist machines which you say you saw in different parts of the country, were not the cross-beams, or putlogs as you call them, pierced through with a hole, and then the cables run down through those holes in the end of the putlog, and through the—between the parts of the frame?

A. Some of them.

170 X Q. Did you see any that were?

A. Yes, sir.

171 X Q. How were they mounted?

A. Mounted with the putlog through between the two rods that form the frame, resting on the plate at the bottom, and the cable just ran down over the edge of the putlog.

172 X Q. Where did you see anything of that kind?

A. On several jobs.

173 X Q. Where? That is what I am interested in knowing.

A. I saw it on a job which was being put up by the McGraff people, in Columbus, Ohio.

174 X Q. Do you know the location of the building?

A. I know the location, but I could not tell you the name of the street or building.

175 X Q. In this Little Wonder machine you have here, the planks that serve as the cross pieces or putlogs, are pierced by these rods forming the sides of the mechanism, are not they?

A. Some of them had holes, through, which allowed the rods to go through.

176 X Q. In other words, you pierced the cross logs, or putlogs with three holes, one for the upright member on one side, 107 and for the upright on the other, and the other being the hole thro' which the cable runs, then removed the lower plate with the bolt and put the rods and cable through these holes, and then clamped it up from the under side and turned on the bolts, do you?

A. Some of the machines were that way, others not. Others had just a putlog through them without any holes.

177 X Q. In that event the cable ran through the holes?

A. No, over the side of the putlogs.

178 X Q. Tell us where you saw any that were not pierced in that way.

(Witness always refers to Exhibit 15.)

A. I saw some in Columbus.

179 X Q. I thought you were talking about the Whitney, not the Little Wonder. Which did they use as a fact?

A. The Little Wonder.

180 X Q. That is the machine you see here?

A. Yes, sir.

181 X Q. When was that?

A. What year?

182 X Q. Yes sir. I thought you said 1912.

A. I am not sure whether 1911 or 1912.

182 X Q. Don't you know the Little Wonder machine was not put out at all until after 1913?

A. Can I refer to a memorandum for those dates?

184 X Q. Certainly. I should be glad to have you correct that.

A. It is 1914 or 1915.

185 X Q. You saw the Little Wonder in 1914 or 1915, instead of 1911 and 1912?

A. Yes sir.

186 X Q. Where was it located?

A. In Columbus.

187 X Q. Where in Columbus? I want to get the location of that building.

A. On the same street as the new hotel just erected, which is recently erected in Columbus, about two squares from the main street.

188 X Q. I see by this circular that you issued in your business in 1912 they make reference to a gold medal awarded by the American Museum of Safety. To what construction did that medal relate?

A. I don't know.

189 X Q. You don't know anything about the award at all?
108 A. I don't except that a medal was awarded.

190 X Q. You know there was an award?

A. There was a medal awarded.

191 X Q. You don't know whether they were talking about the overhead or one of the platform?

A. I understood it was a platform machine.

192 X Q. By platform machine you mean one with a hoisting mechanism on the scaffold like the hoisting mechanism in Exhibit 15?

A. Yes. I understand they had several medals, but I don't know what particular machines they are for.

193 X Q. In this device 15 scaffolding device, after you wind up a certain amount of cable, you have to hold the platform in that position by some support, and then unwind the cable before you can proceed further up the building, don't you?

A. Yes, if the outriggers are not placed at the top of the building.

194 X Q. If placed on the top, and the building high, you can wind only so much cable and can go only so high at one jump?

A. No.

195 X Q. How high can you go at each jump?

A. 100 feet.

196 X Q. Is that true of either the scaffold hoist machine or Little Wonder machine? You can go clear to the top of the building with that without a change, can't you?

A. Yes sir, provided there is no cornice in the road.

197 X Q. Did you ever hear of the Murray patent with which these devices are marked?

A. Yes sir.

198 X Q. Is the patent which I now hand you, 854,959 of May 28th, 1907, the one you refer to? Is that the patent you refer to?

A. I understand this is.

Q. Is this the patent you are talking about as the one?

A. I could not answer.

199 X Q. This Murray patent, the one in which the scaffolding is supported on figure 2 when you are shifting the cable, unwinding the cable to give a new hitch in going up the building, is not it?

A. Yes sir.

200 X Q. How does that picture on figure 1 which I show you in that patent, differ from the actual construction which has been put in by you since 1912, if at all?

100 A. I don't understand the question.

201 X Q. How if at all does the construction shown in figure 1 of the Murray patent of May 28th, 1907, differ from the construction which you have been installing for the Patent Scaffolding Company or the plaintiff since you began doing business with them?

A. There are some differences.

202 X Q. What are they?

A. We now use the shackle instead of a hook. We use the chain here sometimes instead of a rope.

203 X Q. Aside from those two changes they are the same?

A. The machine is somewhat different.

204 X Q. How different?

A. This would appear to be a gear and pinion machine, and the machines we now put out are ratchet machines.

205 X Q. Aside from that, what is it?

A. We use a steel outrigger, and this looks to be a plank or wooden putlog—I mean plank or wooden putlog.

206 X Q. Aside from that they are the same?

A. I can't say whether this frame here is a U-frame, extends under or not.

207 X Q. How could the things be supported unless it was?

A. It looks as if there are two angles riveted to the frame to carry the putlog.

208 X Q. In that device that is shown in that Murray patent your device is marked under, there are hoisting devices arranged in pairs and connected with the putlogs, are not they?

A. Yes sir.

209 X Q. And they are operated from the scaffold so as to raise or lower the scaffold by the men on the scaffold, are not they?

A. Yes sir.

210 X Q. And there is a putlog between the pairs of scaffolding devices, that is the devices like Exhibit 15 substantially, which connect these two scaffolding devices in pairs in this patent?

A. Yes sir.

211 X Q. And these putlogs are connected with boards running longitudinally of the building?

A. Yes sir.

212 X Q. And there is a drum mechanism by which the scaffolding is raised at each corner of the scaffold by the workmen on it, in this patent?

110 By the Court: The patent speaks for itself.

(Question withdrawn.)

213 X Q. Just what is there in the scaffold devices that you are selling and have been selling for the Patent Scaffolding Company for a number of years, that differ in advantage or result from what you have examined there in the Murray patent?

Mr. Goepel: He is referring to figure 1.

A. Are you referring to this patent right here?

214 X Q. I am referring to the entire Murray patent you have in your hands, and ask you to state how if at all—what advantages is any exist in the structure you have been putting up over what is shown there.

A. In the machines that we are putting up now, the putlog is narrower and enables the machines to be raised to uneven heights without opening the planks where they are lapped.

215 X Q. Was that all?

A. The machines as we furnish them now, the putlogs are not fastened rigidly to the frame of the machines.

216 X Q. They are held by bolts now?

A. The bolts go through the putlog and through the U-frames and rest on the frame, but the bolts are left loose so that the putlog can hinge, as it were, on the frame.

217 X Q. Is that all?

A. Having the putlog hinged, as it were, on the frame of the machine, allows the cable to wind evenly on the drum, the machine being vertical at all times.

218 X Q. There are two bolts in the construction now, through each end of the putlogs are not there?

A. There are two bolts in each end of the putlog.

219 X Q. So that you have—instead of having a pivot in the middle, you have the frames rest on two points to support each end?

A. The putlog is resting on two points—resting on two bolts.

220 X Q. Does it rest that way all the time, or swing from one to the other as this tilts?

A. Swings from one to the other.

221 X Q. If it swings from one to the other, you would have machines out of line when raising it up, would not you?

A. No, the bolts are sufficiently close in the machine.

222 X Q. How far apart are those bolts in the actual putlogs you put out with these devices?

A. As nearly as I can recollect, about 6 inches.

223 X Q. Are you sure about that?

A. Some of them may be closer together.

224 X Q. Are not they farther apart than that too, some of them? These cuts show they are close to the sides of the frame.

Objected to, the cut speaks for itself. If he wants to ask the witness about it that is another matter.

By the Court: Go on.

Objection overruled. Plaintiff excepts.

225 X Q. Do the cuts show them accurately or don't they? I hand you the cuts.

(Referring to defendant's figure No. 2.)

A. The cut shows that one end the bolts are close to the frame, but on the other they are somewhat closer together.

226 X Q. When you take in these devices like that shown in Plaintiff's Exhibit 16, that is, get to the top of of the building, how do you take in the device, if you have ever seen it done?

A. They usually unbolt the putlog at the point of the building or window from where they are reaching to take the machine in, and release the first drum, take that in on to the floor, then the man at the top slides the shackle in close, they take the other putlog and turn it around and get it out of the machine, out of the frame, then take down the other drum.

227 X Q. I suppose you mean to tell the court they reach out

of the window and unbolt the thing while still outside of the wall, they don't pull the whole machine in at one time?

A. Sometimes they do.

228 X Q. That is the general practice, is not it?

A. I could not say that.

229 X Q. How often have you seen these machines taken in when they got to the top of the building?

A. I could not say. Several times. Not as many times may be as our men that erect them.

230 X Q. You have seen them pull them in as a whole?

A. Yes, I have seen that done in both ways. But our men take them in the usual way.

231 X Q. Did you ever see any of the Whitney Scaffold Hoist machines taken in at the top of the building?

A. No, I cannot say that I have.

232 X Q. Did you ever see any of the Little Wonder machines taken in at the top of the building?

112 A. No, I can't say that I have.

223 X Q. You can't say whether they take them in as a whole, or take them in pieces first?

A. No.

234 X Q. Has anybody in Chicago been handling these devices of Plaintiff's Exhibit 15 longer than you have?

A. Yes sir, the Patent Scaffolding Company.

235 X Q. How long had they been handling them prior to the time you handled these devices?

A. The first I saw of them I think was 1910.

236 X Q. That is, the first time you saw them they were then being handled by the Patent Scaffolding Company?

A. So far as I know.

237 X Q. And they were substantially like Plaintiff's Exhibit 15?

A. Yes sir.

Redirect examination.

By Mr. Lane:

238 R. D. Q. In answer to the last question, were you connected with the Patent Scaffolding Company at the time when you said you saw some of them in 1910?

A. No.

239 R. D. Q. You didn't become connected with them until when?

A. 1912.

240 R. D. Q. When you spoke of machines, what did you mean by that the U-shaped frames, or what?

A. We usually call them a machine and two drums with a cross putlog and an outrigger and fastening.

241 R. D. Q. How far apart are these machines put in rigging

scaffolding? By machines I now mean what you just said, namely, two frames and the putlog?

A. The machines are put at different distances to accommodate the length of planking they have on hand which form the platform, from 7 foot 6 to 9 feet apart.

242 R. D. Q. In your answers about the Murray patent, to the questions you were asked, and when you were asked to compare it with some of the devices that you saw in the market in 1912, did any of the devices you saw on the market at that time have one rivet on one of the legs of the frame fastened to the putlog, as shown in figure 2 of the Murry patent? No. 854959?

113 A. No.

243 R. D. Q. Did any of those machines that you saw have the frame in the form of an inverted U, as shown in Fig. 2 of that patent, with the free ends of the legs projecting downwardly, as shown in Fig. 2 of that patent?

A. No.

244 R. D. Q. As a practical man, what would be the effect if Murray, instead of the rivet used in Fig. 2, had a loose bolt?

Objected to, the patent speaks for itself, and therefore secondary evidence.

Objection overruled. Defendant excepts.

A. It would allow the drums to tilt in or out, or at least in towards the building or out.

245 R. D. Q. What would happen to the cable then, in case the free leg of the inverted U which is not riveted, passed away from the putlog?

A. The cable would crowd to the flange of the machine and all piled up in one place.

246 R. D. Q. Would that have any effect on the life of the cable?

Objected to.

A. It would break the stands of the cable.

247 R. D. Q. What kind of loads are usual on these platforms, and how would such loads be taken care of by the single rivet you saw in each of these frames?

A. The load at times on the platform is considerable, figuring the number of men and material that is used on the platform. The machine as shown here with the one rivet, would hinge at the riveted point, preventing the cable from winding smoothly on the drum.

248 R. D. Q. What if any tendency would there be to pull out the remaining metal at the end of the unverted U or the leg of the U where riveted when the load like that you speak of would be on such a rivet?

A. It would tend to twist the frame apart.

249 R. D. Q. Have you seen at any time, and specially at all these instances inquired of in your cross-examination when you answered about Plaintiff's exhibit 15, the U inverted as shown in the Murray patent No. 854,959?

A. No.

250 R. D. Q. In all those cases you testified about, the U-shape was in the form of a U with the free legs extending upwardly?

114 A. Yes sir.

251 R. D. Q. That was the case with the Henderson and all the other uses you testified about, including your own, in Cleveland?

A. Yes sir.

252 R. D. Q. Again referring to this figure 2 of the Murray patent No. 854,959, please state how many planks there are between the two frames, and whether one could, with the picture there shown, put another plank in underneath the drum?

(Question waived.)

253 R. D. Q. What would be the effect of the use of the gear in the Murray patent—*fsa* gear would be of that size?

A. You would not be able to use only the number of plank that would go between the two machines. The gear would prevent you from putting one between the frames.

254 R. D. Q. You were asked on cross-examination about the dismantling of U-shaped frames like plaintiff's exhibit 15, when they reached the upper part of the building. What can you say briefly about the installation of such device—installed separate or in the form of a complete machine?

A. The devices were delivered onto the job separately, that is the drums and putlogs were not attached.

255 R. D. Q. And then they were assembled on the job in the manner you testified they were dismantled?

A. Then they were assembled by taking out the bolts at one end and passing through the putlog, through the U-frame, and then placing the other frame of the drum between the angles forming the putlog and putting the bolts through the angles and through the U-frame.

256 R. D. Q. Portions of the putlog rested on the U-frames?

A. The bolts rested on the U-shaped frames, yes sir.

By Mr. Lane:

257 —. As to whether all of the devices like Plaintiff's Exhibit 15 were marked with this Murray patent as appears on the brass plates on this exhibit?

A. They were supposed to be.

By Mr. Blum:

258 R. D. Q. To what feature of the patent you have in your hand, the Murray patent, do the marks relate?

Objected to as hearsay.

Objection overruled. Defendant excepts.

A. To the shifting—

By the Court: I do not suppose it is proper for the witness to limit the effect of the marking in any way.

(Short recess.)

15

Statements of Court and Counsel.

By Mr. Blum: May it please your honor: Our next proceeding will be to examine the officers of the defendant and attempt to show they took some of these machines and shipped them direct to the users with respect to whom Mr. French has testified. The defendant refused to concede this. We issued a subpoena for Whitney and he has not been found in this jurisdiction. We are compelled to go to some length to supply this missing link in the chain of evidence.

By Mr. Lane: I do not understand the proposition.

By Mr. Blum: The point is this: Will you concede that you maintained a sort of storage place where you kept these machines, and upon receiving an order, that you would ship them direct to the customers? That you did so in several cases?

By Mr. Lane: We have no objection to stipulate—as I understand the situation it is this: that Mr. Whitney drew specifications and submitted them to the Chain Belt Company, the defendant here for the manufacture of these devices, both the Little Wonder and Whitney scaffold device. Exhibit 16—exh. 19.

It is Admitted on behalf of the defendants that upon order of Egbert Whitney and from specifications prepared and submitted by the defendant made Little Wonder machines shown in evidence by plaintiff's Exhibit 16, and has done so since 1914, and commencing April 3rd, 1914; and that in the same way it made, prior to the fall of 1913, the Whitney Scaffold hoist machines, which it delivered to customers on the order of Mr. Egbert Whitney.

Mr. Blum: If you are willing to admit the record taken in the Pittsburgh case it may save us some time.

By Mr. Lane: We do not admit that.

By Mr. Blum: We offer that—

By Mr. Lane: It is all plaintiff's evidence, not defendants' evidence at all.

By Mr. Blum: It would save considerable expense if we could consider as evidence here the evidence taken in the Pittsburgh case.

By the Court: That is for you to agree upon. If you cannot, I assume that record is not evidence of anything except to show the scope of that decision. The testimony given by witnesses is not supposed to be admissible here.

The defendants' counsel refuse to stipulate the record in that case evidence in this case for any purpose.

The Plaintiff Rests.

Defendants' Testimony.

Testimony of Alfred E. Davidson.

ALFRED E. DAVIDSON, called by defendants, being sworn, testifies:

Examined by Mr. Lane:

Defendants' Counsel offer in evidence the whole record in the Pittsburgh case, New York Scaffolding Company against Liebel-Binney Construction Company, as Defendants' Exhibit No. 6. Certified copies.

By Mr. Blum: There is no question they are entitled to show that it was a suit pending—we will concede there was such a suit pending. That is the only purpose for which this record can be used, and we will permit this record is irrelevant, because the court is not privileged to see it because this witness is now here, certified copy is not sufficient evidence, we will not urge that point, the parties are not the same and are not privileged with each other, and under the authorities the fact that Whitney has intervened does not permit him to urge any defense, or do anything which the Chain Belt Company of itself could not do. Our point is that they by their own supplemental answer have stated the only relationship between Whitney and the Chain Belt Company is that of manufacturer and customer. There is no privity between them, they are estopped from denying this point. When Whitney intervened he could only do those things which the Chain Belt Company of itself can do.

By Mr. Lane: I am simply offering to show what happened in the Pittsburgh case.

By the Court: I will reserve my ruling. My judgment is it is not admissible at this time.

By Mr. Lane: What I am offering it for is simply to show what the court in Pittsburgh based its ruling upon.

By the Court: I will reserve my final ruling. I will take it for the present subject to ruling. My judgment is it is not admissible.

By Mr. Lane: I offer in evidence the decree in that case, in the case of New York Scaffolding Company vs. Liebel-Binney Construction Co., as defendant's Exhibit No. 7.

By the Court: You might simply call my attention to the volume of the federal reporter, no exception could be taken to it.

By Mr. Blum: We will concede this opinion has not been changed. 117 The only purpose of offering it would be to show out some sort of estoppel as against us and the Chain Belt Company, and the Supreme Court has held, 225 U. S., even when joint tortfeasors—which is not the case here may sue, that is not admissible against a second tortfeasor.

By Mr. Lane: I am not urging it as evidence. I think I will hand it to your honor as not a part of the record, in order to preserve my rights—

By the Court: Counsel will concede you would have been entitled

within your rights if you had said, "I would like to hand you a copy of what took place in Pittsburgh."

By Mr. Lane: I would like to have it in the record.

By the Court: It is not a part of this record. I think, Mr. Lane, the court would be justified if you remained silent, to write down to the clerk and ask him to send a transcript.

By Mr. Lane: I would like to offer in evidence specifically the record in the Pittsburgh case, New York Scaffolding Company vs. Liebel-Binney, for the purpose of showing what was before the court and upon what his conclusion was based.

By the Court: For what purpose do you want to show that?

By Mr. Lane: For the purpose that the court have before him the record on which the Court based his conclusion. It seems to me it is clearly material to show, if I was permitted to show, as they were permitted to do here by putting in the decree in the case over my objection, to put in this—they put in things that have happened subsequently to the decree of the court of appeals, and over my objections as to the relevancy and competency of it. The same question comes up, and I ask to put in, and it is not allowed.

I would like to move to strike out all of the documents that are offered in evidence relative to the case in Nebraska against Egbert Whitney brought by the New York Scaffolding Company, plaintiff, marked in evidence as Exhibits 5 and 6.

By Mr. Blum: I believe the opinion of his Honor Judge Munger is admissible as a matter of notice. The opinion of Judge Munger cannot be understood unless the court has before it that decree. He refers to that decree in his opinion. The only purpose for which we offered the decree is for the purpose of showing the range of equivalents.

By the Court: The motion to strike this from the files as evidence will be granted. The objection to your offer will be sustained.

Defendant excepts.

By Mr. Lane: I will say for the benefit of the court it examine the record in the Pittsburgh case to see what the conclusion was there.

By the Court: The records will be excluded so far as being a part of the evidence in this case; and both parties will be at liberty to make such references to either of the records as they desire. There is no objection whatever, if you produce the records in those cases, to have them identified in some way as being the records in those cases. That is a different thing from offering them in evidence, but I assume a case that goes to the Court of Appeals, that either party could object to having those records incorporated in the record in this case.

By Mr. Lane: I ask to have this marked in this case, not as evidence, but simply for identification.

Marked Exhibit 6 for identification. Exhibits 5 and 6 are marked for identification.

1 Q. Did you testify in the case brought by this plaintiff against Liebel-Binney Construction Company as follows:

By Mr. Lane: Have the whole thing written in. I will read the testimony to the witness if I may. "Alfred E. Davidson, called on behalf of the plaintiff, being duly sworn, testified as follows":

Objected to. Not relevant to what he is going to state to-day.

By Mr. Lane: He is an hostile witness.

By the Court: He is called by you.

2 Q. Please state your name, age, residence and occupation.

A. Age 55, residence New Rochelle, occupation, contractor, and fold equipment.

3 Q. Will you please state what connection if any you have with the New York Scaffolding Company?

A. Stockholder.

4 A. An officer of any kind?

A. No.

5 Q. For how long a time have you been a stockholder in the New York Scaffolding Company?

A. Since its formation.

6 Q. When was it formed?

A. I cannot say positively whether it was May, 1908 or 1909.

119 7 Q. Have you anything that will refresh your memory as to when the company was incorporated?

(May, 1908, conceded by plaintiff's counsel.)

8 Q. What business has the New York Scaffolding Company been in since its incorporation May, 1908?

A. Furnishing scaffoldings.

9 Q. And when did it acquire the Murray patent, No. 854,959?

A. I cannot recall the exact date.

10 Q. Prior to the incorporation or about that time?

A. I do not recollect.

11 Q. How was the Murray construction as put out by the New York Scaffolding Company first constructed, as compared with Plaintiff's Exhibit No. 15?

A. I know very little about the construction, paid little attention to it.

12 Q. When did you first start manufacturing under the Murray patent No. 854,959?

A. I cannot say.

13 Q. When this company was organized you were an officer in it, were you not?

A. Yes sir.

14 Q. What office did you hold at that time?

A. President.

15 Q. For how long a time were you president of the New York Scaffolding Company.

A. I cannot remember to-day how many months.

16 Q. For what purpose was the New York Scaffolding Company organized?

A. To do a business.

17 Q. Do a business of what?

A. Handling scaffolding.

18 Q. What has this scaffold device been known as in your business of the New York Scaffolding Company? That is Plaintiff's Exhibit 15.

A. That is this one?

19 Q. Yes sir. You testified in the Pittsburgh case it was the Murray type, didn't you?

Objected to, impeaching his own witness.

Overruled. Exception.

A. I was going to answer it is known in trade as the gold medal scaffold.

20 Q. That gold medal scaffold was put out as early as 1908, was it not?

A. I think not.

21 Q. When was the award, the gold medal award made on this scaffold?

A. 1910.

22 Q. For how long a time has this scaffolding device on which the gold medal was awarded, been put out by the New York Scaffolding Company prior to that time?

A. Just how many months I can't say.

23 Q. How many years?

A. It would be months.

24 Q. Your book refers to it as years, does not it?

A. It may be. I didn't write the book.

25 Q. How long after you incorporated the New York Scaffolding Company, did you start manufacturing or selling or leasing this device like Plaintiff's Exhibit 15? Substantially like this?

A. Some time after.

26 Q. How long after?

A. I can't say.

27 Q. You testified in the Pittsburgh case that you became interested in the New York Scaffolding Company in 1908 and that you started at that time putting out this Murray type of device with the U-shaped frame, with putlogs at the lower end and hoisting device by which the device was lowered and raised, did you not?

Objected to (by Mr. Blum). Reading a long statement, and the witness is not allowed to see what he is reading.

(Question withdrawn.)

28 Q. Is not it a fact that you started putting out this Murray type of device—that is, the New York Scaffolding Company—almost immediately after you incorporated this company, in 1908?

A. A considerable time after, I think.

29 Q. How long after, as nearly as you can recall?

A. I don't know to-day.

30 Q. How long, as nearly as you can recall, was it after the incorporation that you started putting out these devices?

A. As they are to-day?

31 Q. No, with the U-shaped frame, and with a windlass and putlog?

A. I should think possibly a year. I cannot say.

32 Q. You incorporated this company for the purpose of putting out these devices, did you not?

A. This particular device?

121 33 Q. No, a device with a U-shaped frame and windlass?

A. Scaffolding machine?

34 Q. Scaffolding machine, yes sir. That was the purpose of the incorporation?

A. Yes sir.

35 Q. And machines which operated from the scaffold by the men on it?

A. No, we operated overhead machines.

36 Q. You operated both in 1908, didn't you?

A. We were experimenting with machines.

37 Q. How long a time had you been putting out these machines with the U-shaped frames, substantially like the one in Exhibit 15, with U-shaped frame underneath the putlogs as shown in the circulars you put out, prior to the time you ever heard of Henderson?

A. I cannot say.

38 Q. You had been putting them out some time, had you not?

A. Some sort of machine.

39 Q. I would like to know just what machine it was that you were putting out prior to that time, as nearly as you can tell us. You remembered so well before, it is surprising you don't remember now.

A. I could tell you the reason. I had no opportunity to look up date before I came. I tried to know something about the case to-day. I have forgotten. I don't know that testimony.

40 Q. You qualified as an expert both in the case at Pittsburgh and case in the West, did not you, about these machines?

A. I think not, as I understand the qualification, I qualified as a scaffold man, knowing how to get business and knowing what was good and safe practice; but I think I said in that testimony I was not an expert on machines and could not testify as to fine points. That is my recollection to-day.

41 Q. Is it a fact that in 1910, the American Museum of Safety, an institution composed of some of the most eminent engineers in the country, awarded a gold medal to the plaintiff for the Murray outrigger type of scaffold. The jury awarded, after looking over the different types of scaffolds—gave this medal with the statement it was a great factor in the saving of human lives, and that no accident ever occurred through any defect in the plaintiff's scaffold of the Murray type?

By Mr. Blum: What does he mean by the Murray device?
Is it a trade name? I ask him to make his question definite,
because Murray device alone does not mean anything in this court.
It might be a trade name.

By Mr. Lane: The device constructed under the Murray patent
of the plaintiff. The device made by the plaintiff as modification of
the Murray patent.

Court: (?) Find out who got the gold medal.

42 Q. Was there a gold medal awarded in 1910 for a device like

A. November 10th we received a gold medal for a scaffold ma-
chine.

43 Q. What kind of scaffold was that?

A. It was a machine operated from the platform of the scaffold.

44 Q. Was it operated by the men on it with the windlass near
the scaffold?

A. Yes.

45 Q. How did it differ if at all, from the construction of Plain-
Exhibit No. 15?

A. I believe that award was made on substantially this 15 exhibit.

46 Q. And the putlogs were put in the same way as they are put
to-day, in connection with that machine were they?

A. I imagine so.

47 Q. You know so?

A. I know very little about the structure of this machine.

By Mr. Blum: There are two methods used today, which one of
them is it?

48 Q. As a matter of fact, Mr. Davidson, these machines are ar-
ranged usually at right angles, that is, right angles to the building as
distinguished from broadside, and the putlogs are supported on the
shaped bar by means of bolts, are they not?

A. Used both ways, as I understand it.

49 Q. Tell me just where it is ever used any other way than at
right angles, as you understand it.

A. Do you mean at what place?

50 Q. Yes sir.

A. I never erected a machine, I never sold one, never tried to tell
anybody just how they were made, and so I am not the one to an-
swer these fine points.

51 Q. Does not this cut show the way in which the scaffold has
been put out generally by the New York Scaffolding Com-
pany, in connection with the sale or leasing of these ma-
chines? In my question I am referring to page 11 of De-
fendant's Exhibit No. 2.

A. They look similar to me.

52 Q. This on No. 10 shows the thing you are advertising, does
not it, the New York Scaffolding Company, in connection with the
sale of its machines?

A. I should say that is an old—that is a riveted structure, solid structure.

53 Q. How long have you been putting out such structures as shown on page 10 of plaintiff's Exh. 2?

A. We are not putting out a riveted structure now, as I understand.

54 Q. How long did you put it out?

A. I said I could not remember.

55 Q. Were you using that when you were first incorporated?

A. Well, I would imagine so.

56 Q. In 1908?

Mr. Blum: The witness is referring to —

Witness: I mean a riveted solid structure.

75 Q. Does this cut on page 10 show the structure you refer to?

A. I don't know. It looks like a riveted structure. It is impossible to tell by that picture.

76 Q. All the devices that have been put up by the New York Scaffolding Company since incorporation in 1908, have been arranged, relative to the platform, substantially as shown in Plaintiff's Exhibit No. 2 on page 13, have they not? That is, relative to the side of the building?

A. Not all.

77 Q. What percentage of them have been shown that way?

A. I could not say.

78 Q. What do you know about it. Tell us what you do know, so I can get some information from you.

A. If you will ask me about something I do know well in the business, I will answer. I think I have told you I am not a mechanical engineer.

79 Q. You have been put on as an expert in two or three cases?

A. Not as a mechanical engineer—an expert knowing something about scaffolding conditions.

80 Q. This shows one of the ways that the New York Scaffolding Company has advocated the use of its devices continuously since it started in business in 1908?

A. I am quite sure that was one of our pictures.

81 Q. That was one of your early pictures?

A. I don't know what year.

82 Q. In this circular you say since the *instruction* of this new form of scaffolds there have been no fatal accidents where it has been used, although in the last two years 319 buildings were erected with its aid, where 8265 machines were employed and not one man was injured. Is that a correct statement?

A. I have never heard of an accident.

83 Q. And that referred to which construction?

A. The construction on which we received the award.

84 Q. And the award was made in November 1910?

A. I believe so.

85 Q. At that time you had never met Mr. Henderson or know Mr. Henderson in your company November 1910?

A. I would say so.

86 Q. You had not been selling any devices claiming to sell them under his patent at that time, had you?

A. I don't recollect.

87 Q. You did not get the assignment of the Henderson patent until 1911, did you?

A. I have not looked it up.

88 Q. Is it a fact that in 1912 you had been using the scaffold device on which the award was made, the gold medal award was made, for five years, as stated in fact in your circular Defendant's Exhibit No. 2?

A. I could not say. May be it was an ad. writer extending the year.

89 Q. Yop had been putting them out for sometime before you applied for your gold medal?

A. It must have been some months.

By Mr. Lane: I would like to have you look up and find out between now and Wednesday when you started putting out on the market, either by lease or sale or otherwise, the device on which the award was made, which is shown in this circular Defendant's Exhibit No. 2.

Witness: I will try to do it.

By Mr. Lane: I want to get both—when you put out the one that was awarded the medal and when the one shown in this circular.

(Witness excused for the present.)

(Dan W. Kimball)

125 *Testimony of Dan. W. Kimball.*

DAN. W. KIMBALL, called by defendant, being sworn, testified:

By Mr. Lane:

(Lives at Grand Rapids, Mich.) Engineer.

1 Q. I hand you two photographs marked Defendants' Exhibits 7 and 8, and ask you if you know what these show.

By Mr. Blum: May we reserve our objection to these photographs—the admissibility of these photographs, before they are marked as exhibits?

A. They show the scaffolding on the Grand Rapids Savings Bank building that is being erected by Hauser, Owen, Ames Company.

2 Q. Does Exhibit No. 7 show the way in which the Whitney Scaffold Hoist machines are used on the scaffold?

A. Yes, I should say it did.

3 Q. That is, they are arranged at right angles as distinguished from the broadside of the building?

A. Yes sir.

4 Q. And that is the condition of the Little Wonder machines used by that company there?

A. I have not examined that. I noticed them from the street there, and I think that is the way they stand.

By Mr. Lane: They are offered in evidence as Defendants' Exhibit 7 and 8.

By Mr. Blum: Objected to unless shown they were rigged that way before the filing of the bill of complaint.

By the Court: You may cross-examine him.

By Mr. Blum:

5 X Q. Were the scaffolds shown in defendants' exhibits 7 and 8 about which you have just testified—rigged up how long ago?

A. I should say about six weeks.

By Mr. Blum: Motion by plaintiff to strike out this testimony because it does not relate to use before the filing of the bill of complaint, which was done in the latter part of 1915, and since we cannot put them in issue ourselves. We believe it is impossible for these defendants to rig up a device and bring it into court when no part of the doings in issue here.

By the Court: The objection will stand. I think it goes to the weight of the evidence. It simply show the way in which these devices were used. I will hear you later.

6 X Q. Did you take these photographs yourself?

A. No.

126 7 X Q. Did you actually go upon the platforms?

A. Yes, I have been upon the platforms, yes.

8 X Q. Upon which one of the platforms referred to in these two photographs?

A. That one there. (Exh. 8.)

9 X Q. Did you see the workmen operate these machines for the purpose of raising the platform?

A. Yes sir.

10 X Q. Upon this very platform?

A. Yes sir.

11 X Q. Did you examine the connection between the planks of these machines to determine just how the platform was made?

A. I never examined it very carefully. I noticed from below there is a slot in the end of the putlog that allows this machine to slip into it; but I was not close enough to tell just how it was bolted up.

12 X Q. Could you make a sketch, or give us some positive testimony, seeing that the photograph does not show as to that?

A. I have made a sketch that would show part of it. The putlogs seem to be a piece about 2 x 8 with a slot made in that fashion—

13 X Q. Just a second. Mark it, identify the parts as you go along. You have now marked the putlog by No. 1?

A. Yes sir. The machines in the location marked No. 2, and I say I never examined it close enough to see just how that was fastened, just merely located the relative positions of the putlog and the machine, but as to how the machine is fastened to the plank, I could not say exactly.

14 X Q. I ask you to loog at defendant's exhibit No. 8. What do you know about the photograph or picture? Did you personally examine these scaffolds?

A. I have been on the scaffold and on the building. I never went up for the purpose of looking them over. I looked at them usually. It is not part of my work, to look them over.

15 X Q. Don't the machines in this defendants' Exh. No. 8 on the long platform appear broadside or parallel to the wall of the building?

A. Yes, broadside, along there and at right angles on this one here.

(Pointing to the short upper platform.)

16 X Q. About all you did was to take a short platform and rig that up with the frames at right angles to the wall of the building? Is that correct? As shown in Exh. 7?

A. This equipment came at two different times, and undoubtedly there is about half of it at one time for two sides of the building, and the front half, including this elevation here, came later.

(In saying later, the witness referred to the long platform shown in the front of the building in Defendants' Exhibit 8.)

17 X Q. How much of the building do you positively know is rigged up with these machines having their frames placed at right angles to the building, shown in Exhibit 7?

A. The two sides of the building, the one shown in Exhibit 7 and one other side I can't identify from the picture, were operated by equipment that came first. We carried up the two rear walls first, and all that equipment came at the same time, and the equipment for the front two sides came later.

18 X Q. Am I to understand that the first equipment you simply received these Little Wonder machines yourself, and made your own putlogs on the job and mounted them broadside to the building?

A. Just the other way around. The first machines that came had special putlogs with them.

19 X Q. How did you mark these with the special putlogs?

A. These are the ones. They are indicated here. These came with the machine.

(Referring to the pencil sketch made by the witness.)

20 X Q. And as for the machines the Little Wonder machines that came without putlogs you sawed out your putlogs and placed them broadside to the building? I will amend the question by saying, the frames broadside to the building, not the putlogs. In

other words, when these machines were sent to you without special putlogs, and up to about six weeks ago, you always mounted them parallel to the wall of the building? Is that right?

A. I believe so.

21 X Q. That is the standard practice among the contractors is not it?

A. I have seen none of those except used by ourselves.

22 X Q. Are you familiar with the practice among other contractors?

A. I have never seen these machines except on our own work.

128 By Mr. Blum: I must object to the testimony of the witness with respect to the rig shown in Exhibit 7 because he cannot state how the machines were fastened to the putlogs, and I renew my objection to the relevancy of all this evidence save that showing the custom among the contractors, on the ground that it occurred after the filing of the bill of complaint.

Mr. Lane: Concede the objection and withdraw the whole deposition.

By the Court:

23 Q. Were you the contractor on the job?

A. I am engineer for the contractor.

24 Q. Have you any explanation of the difference in the use of these machines, one of them being parallel and the other at right angles—and one showing to be at right angles and the other parallel, other than you have given?

A. The first machines came with the putlogs made to go that way and were arranged that way. The second load came later, and my impression is they didn't have time to send the putlogs with them.

25 Q. The first load that came had the putlogs for placing the machines at right angles?

A. Right angles to the wall.

26 Q. Had you ever seen any job type like that before?

A. No.

27 Q. Had you been familiar with the use of the machine in the other way prior to that time?

A. Yes sir, we used them on one or two jobs the other way.

28 Q. Has there been any explanation offered of the different types since that time?

A. I don't remember that they made any explanation. We were to place them that way. They worked fully as well that way, and it was quicker to put them up that way, that is, the putlogs being furnished.

29 Q. How much later were the second types sent?

A. I should say about three weeks later.

30 Q. Any comments then as to the change?

A. We had a letter stating that we could use the first putlogs as a pattern and make some similar to use. I don't remember why

they were not shipped. I think it was because they did not have any available at that time.

31 Q. Did you receive a letter with the first shipment?

A. We received a letter with the first shipment saying they were now furnishing these with the machines, and instructing us how to use them.

32 Q. Where is that letter?

A. I have a copy of that. "Enclose bill for four bundles putlogs, 4 inch. We are now furnishing these putlogs for the reason we had a decided improvement over the old method. You slip out the steel plate and slip the machine in the slot and replace the steel plate, and as the plate locks the machine to the putlog it is secured to the machine, and it avoids the necessity of removing the four nuts and replacing them on the machine. It also turns the machine edge-wise to the wall making only an obstruction of 2½ inches on the wall line." The letter is dated April 3.

33 Q. Later on you received a second consignment, wherein they returned to the old method?

A. They didn't send these putlogs. I believe it was their intention to have us use them the same way, but not having them, I think our foreman thought he could rig them up quicker the other way.

34 Q. Have you the letter which you received with the second batch?

A. I was unable to find it. That letter I think was given to our foreman or superintendent and not returned to the office.

(Ruling reserved on the objection.)

Cross-examination.

By Mr. Blum:

35 X Q. In other words, when your foreman got the shipment of these machines without special putlogs, as a matter of course he sawed out wooden putlogs and mounted these machines shown in Defendants' Exhibit 8, broadside to the wall of the building? Is that right?

A. Yes sir.

Redirect examination.

By Mr. Lane.

36 Q. Do you know Mr. French?

A. Yes sir.

37 Q. What was said by Mr. French to you at any recent interviews? I mean the witness here to-day?

Objected to as not proper redirect. A new deposition entirely.

By the Court: You have not laid any foundation.

Adjourned until Wednesday at 10:30 A. M.

130

May 31st, 1916—10:30 a. m.

Hearing resumed. Same Counsel present.

Testimony of Alfred E. Davidson.

The examination of ALFRED E. DAVIDSON resumed by Mr. L.

90 Q. I hand you the Bowyer-Casperson patent offered in evidence by the plaintiff, and ask you to state whether or not that was one of the forms of device used by painters at about that date?

A. I never saw that device in operation.

91 Q. Have you seen devices similar to that device, for painting scaffolds?

A. Never.

92 Q. What did painters use at that time for their scaffolding?

A. They used block and fall and rope slings sometimes, they fastened it up in various ways. But I have never seen a device like that in use.

93 Q. At that time you had seen the ordinary painters' scaffolds with the hooks, rope and tackle on top of the building and coming down to a rope that ran off forming a triangle, and putlog extending through beneath a ladder between the putlogs?

A. Yes.

94 Q. And the putlogs in those extend right angles to the building?

A. Yes.

95 Q. Had you seen hoist chairs similar to that shown in patent No. 797,722 of August 22nd, 1905, being used on buildings?

A. I never saw a device of this kind.

96 Q. Ever see anything similar to that in construction?

A. No.

97 Q. How did the ones you saw differ from the construction of the device which is in the patent before you?

A. I never saw anything like this.

98 Q. How did they differ?

A. That is too deep a question for me, I cannot answer. The block and fall I have seen but in general use rope windlasses are never used.

99 Q. You never saw those used, you mean?

131 A. I never saw them, and they generally get things done in New York as soon as anywhere.

100 Q. You don't know whether they are used or not?

A. That is what I say.

101 A. You have not seen them; that is the idea you are trying to convey?

A. Yes.

102 Q. When did you see devices like that shown in the Cavanaugh patent dated August 8, 1905, No. 796,807 in use, and to what extent are these used?

A. This seems to show a chain.

By The Court: When did you see them in use, if at all?

A. I did not see these in use.

103 Q. Do you mean to say you did not have anything to do with putting into practical use devices substantially like that, save they had a rope instead of a chain for hoisting the device, in New York City at about 1905?

A. If this is a Cavanagh structure then I saw it in use.

104 Q. This was used largely by you, was not it?

A. It is being used by our company now.

105 Q. And has been continuously since 1905?

A. No, we did not handle the Cavanagh structure in 1905.

106 Q. What company were you connected with in 1905?

A. I was connected with several companies.

107 Q. What ones, just name them, any that were handling scaffolding machines?

A. No company handling scaffolding machines.

108 Q. When did you first handle scaffolding devices of any kind, either directly or through any company with which you were associated?

A. After 1908, I think.

109 Q. Why, Mr. Davidson is not it a fact you have been responsible for putting up scaffoldings of various kinds since long prior to 1908, personally or otherwise?

A. I have been in the scaffolding business for about 35 years.

110 Q. Now then, in that scaffolding business during the past 35 years, and as early as 1905, didn't you see, and have used under your direction, devices corresponding almost identically with the construction shown in this Cavanagh patent, save they used a rope here in place of a chain that is marked "F"?

112 A. About 1905?

111 Q. Yes sir.

A. I didn't handle that device, had nothing to do with it. I saw it on bridges around New York City.

112 Q. It was used quite extensively on bridges in 1905 in New York City?

A. I cannot tell you the date.

113 Q. When is the earliest date you can fix you actually saw devices corresponding with this patent in use in New York City?

A. The only date I would fix, because my memory has been more or less fixed the last day I was here.

113 Q. Fix the date.

A. 1908, when our company was organized.

114 Q. You saw them in 1908—as early as 1908 in successful use in New York City?

A. In use.

115 Q. The Cavanagh put on building constructions, shown in this patent?

A. Yes.

116 Q. Have you at any time become interested in this Cavanagh patent, or any company with which you are connected in any way?

A. Yes.

117 Q. And when was that?

A. About 1908.

118 Q. About what time?

A. I think the company was formed in May.

119 Q. And immediately upon the incorporation of the company—the New York Scaffolding Company, the plaintiff, of which you were then president, you took over this Cavanagh patent, didn't you?

A. Well, I think soon after.

120 Q. It was in 1908?

A. Yes sir.

121 Q. And the New York Scaffolding Company brought suit under this Cavanagh patent, has not it?

A. I can't state.

122 Q. Is there any way you can refresh your memory on that point?

A. Well, I am afraid not.

123 Q. I would like—in order to get what the situation is here, I wish you would state just this: What does the New York Scaffolding Company do, what is its business?

A. The New York Scaffolding Company has an interest in patents.

124 Q. What patents? Enumerate them.

A. I cannot.

125 Q. It has the Cavanagh patent amongst others, has not it?

A. I believe it has.

By Mr. Lane: That is 796,807 of August 8, 1905, which I have shown the Judge.

126 Q. It also has the Murray patent No. 854,959 of May 28, 1907, which I now hand you, has not it? That is, it owned that patent?

A. I am not the president——

127 Q. I do not care—do they own that patent?

A. I don't know. I can't state that positively.

128 Q. Mr. Davidson, haven't you testified repeatedly in other cases they did own it and operated it successfully?

A. I have testified in other cases quite a long time ago. I am very much at sea today. At the present time I have no way to refresh my recollection. I intended today to, promised you I would. I did not expect to be called in this case.

129 Q. Just for the purpose of refreshing your memory I would like to call your attention to your testimony in a previous case—just for that purpose. This is in the case of this plaintiff against Egbert Whitney. Did you say there as shown in this abstract I show you?

By Mr. Blum: Objected to—an abstract. If they want to refresh his memory by any deposition where the witness answered by question and answer, it would be fair, but to refer to an abstract which is made in narrative form, which is only a synopsis of what Mr. I

wishes the witness to say, it is objectionable. We have the exact record here.

By the Court: If there is any inaccuracy you have a right to refer to the evidence.

By Mr. Blum: Many a point was not considered important enough to go to the Court of Appeals.

By Mr. Lane: My purpose is to show commercial success of their device. The objection is made a great many times in opinions, that these patents are mere paper patents. I am leading up to the commercial use of these other patents.

134 By Mr. Blum: We never used the Murray patent, so far as the title is concerned. If Mr. Lane wants any stipulation on that I will help him out there.

By Mr. Lane: Will you admit on the record that the Murray patent, No. 854,959, of May 28th, 1907, is owned by the New York Scaffolding Company, and that the New York Scaffolding Company has licensed the use of devices under this Murray patent having marked all of the devices thus licensed with this Murray patent mark, date and number?

By Mr. Blum: I will concede that the New York Scaffolding Company at one time did mark these devices with the Murray shifting patent, which is the one Mr. Lane refers to. I can't concede the New York Scaffolding Company owns that patent at the present time, it does not own it, it having been transferred two or three years ago to another company called the American Safety Device Company. It might have been a year ago. The fact is that patent was transferred to the American Safety Device Company, which does license users of devices of that kind.

By Mr. Lane: Will you admit that the New York Scaffolding Company did for a period of five years, while it owned the Murray patent, mark the devices which it was licensing to sell under this Murray patent No. 854,959, May 28, 1907?

By Mr. Blum: They had another counsel, it is a difficult proposition to tell what was done at that time. They did it for a certain time, but when they began, or what they were doing before that, with other counsel, is a different proposition. We do not know.

Admitted:

They continued the ownership from shortly after the incorporation until two years ago.

By Mr. Lane: You are willing to concede the ownership of the Murray patent was in the plaintiff from about the time of the organization of the corporation until it transferred it to the Safety Device Company?

By Mr. Blum: For the purposes of this case, with the privilege of future correction if in error, we will stipulate that now.

By Mr. Lane: And that during that time the devices like Plaintiff's Exhibit 15 were licensed by the New York Scaffolding Company under that Murray patent No. 854,959 and so marked?

135 By Mr. Blum: Yes, for the purposes of this case. We don't think it amounts to anything. If we go ahead and make a

statement of that kind it may be incorrect and we are binding our client without having a chance to consult him. We don't want to be in a position of wasting time. We are apprehensive if we make a statement in good faith of what occurred before we became counsel.

By the Court: I would not, if I were in your place make the concession in this case, if it is of any importance in this case.

130 Q. This device, Plaintiff's Exhibit No. 15, which is before you, has been termed by you, as one of the officers of the New York Scaffolding Company, as the Murray type of machine, and has been so referred to by you in previous litigations, has not it?

A. That is known by the name of Murray or platform machine, either one we have understood it by.

131 Q. It is called the Murray by the men working for you?

A. Yes sir.

132 Q. And that is the machine that the jury of the American Museum of Safety made the award in 1910?

A. That award was made on the machines of the Patent Scaffolding Company, I think, or the New York Scaffolding Company. It didn't mention, I am quite positive, Murray, or didn't mention Cavanagh machine. They were both on exhibition. The wording of it I do not remember.

133 Q. At the time this award was made, you had not any relations with Mr. Henderson or with his patent? I am speaking of you as an officer of the New York Scaffolding Company, or director.

(Question withdrawn.)

134 Q. At the time the award was made on these Murray or Cavanagh machines, by the American Museum of Safety, you had no rights under the Henderson patent, had you?

A. I would not say.

135 Q. You don't know that you did?

A. I don't know that I did.

136 Q. It is a fact that no accidents ever occurred through any defect in this Murray type of device which is here in evidence as Plaintiff's Exhibit No. 15, is not it?

A. Not any of the devices that we have used.

137 Q. For the purpose of refreshing your recollection, I call your attention to the record in the case of New York Scaffolding Company against Whitney, where you said that no accidents ever occurred through any defect in plaintiff's scaffold of the Murray type." You were referring to this device, were not you—Plaintiff's Exhibit 15?

A. That is read from my deposition?

138 Q. The abstract of your deposition.

A. That would have been a long piece to remember back.

139 Q. You know very well, from your recollection, that that is a fact concerning this Murray patent, don't you?

A. It would have been a fact also concerning the other types we were using.

140 Q. That is, the Murray platform and the Cavanagh overhead type?

A. Any types that we had been using.

141 Q. You used both of those types?

A. We used platform and overhead.

142 Q. And by the platform you mean these like Plaintiff's Exh. 15 which are operated by the men on the scaffold.

A. Platform machine means one that is operated by men from the scaffold.

143 Q. And where the devices for hoisting are adjacent to the scaffold itself?

A. Yes.

144 Q. And for the purpose of refreshing your recollection, you testified in the Whitney case as follows: (reading from abstract.)

"The plaintiff used the Murray machines until Elias H. Henderson, whose patent was in issue produced the device set forth in the petition in issue. The Murray hoisting mechanism had been secured in pairs to iron beams by riveting or bolting, and the scaffolds had been laid on those beams."

Was not that the practice of the New York Scaffolding Company prior to the time they secured the Henderson patent?

A. At a very early date the first types that came out were riveted. We immediately commenced to improve that.

145 Q. That was right shortly after the incorporation?

A. A good while after.

146 Q. How long?

147 A. It went through several months, or perhaps some years. That is as near as I can get from memory. I tried my best to locate this thing.

By Mr. Blum: If counsel is trying to get prior public use by the plaintiff, it is not set up in the answer in any way.

By the Court: It is not in the answer—charging the plaintiff with prior use. I think Mr. Blum's criticism is correct.

By Mr. Lane: My attention is called to this, that I plead prior use by Murray. That is, Murray is the patentee of this device, and coming to that, I shall prove, if I may prove through this gentleman, that prior to the time the New York Scaffolding Company took over this Murray patent, that Murray had used the device himself and the use was continued through the New York Scaffolding Company.

By the Court: They may be willing to concede that if attention is called to the fact by your answer, that the Murray structure as such was an anticipation; but the question of your being permitted to show that during the time they held the Murray patent they changed it, and practically made the Henderson device, that is a different question. So far as the proof here goes to show the Scaffolding Company constructed the Murray apparatus they are notified of that by your answer. But to go from that and show the idea of representing the Henderson patent, that the plaintiff itself revoked out of the Murray patent the Henderson that is a dif-

ferent matter, and I do not think they are charged with knowledge of your purpose to show that.

By Mr. Lane: I would like to make a motion for leave to set up in the answer, or in any other way the court thinks proper, the fact that the plaintiff itself used the devices here in evidence as Plaintiff Exhibit No. 15, long prior to the date of the application for the Henderson patent in suit, and that this device was well known, and used prior to the invention of Henderson, and in public use and sale prior to that time.

By Mr. Blum: This matter was not set up in the answer. Mr. Davidson came with us, we did not intend to use him as a witness, he came on some business of his own. That was not set up in the answer, the answer has been filed sometime, and we do not think there is any merit in the proposition. After we examined Mr.

Davidson exhaustively in Pennsylvania, the facts brought
138 out, it was decided—it was not found there was prior use by ourselves.

Proof admitted, subject to the right of the plaintiff to amplify their case if so advised.

By Mr. Blum: If that requires taking depositions in New York, that terms be imposed.

By the Court: Yes, allowance of terms if rendered necessary.

147 Q. I wish you would now state just whether the New York Scaffolding Company is licensing under the patent at the at the present time.

A. I do not know.

148 Q. You are a director in that company?

A. A stockholder.

149 Q. Are you a director?

A. No.

150 Q. How long has it been since you were a director in that company?

A. I was president for a few months.

151 Q. And you are one of the organizers of the New York Scaffolding Company?

A. I took a little stock in it.

152 Q. You were one of the organizers?

A. I was not one of the organizers. They invited me to be president and kept me president for a few months.

153 Q. Does the New York Scaffolding Company do anything aside from securing licenses under patents? That you know of?

A. I don't know of anything.

154 Q. That is all they do, is not it?

A. I could not say that.

155 Q. What is the Patent Scaffolding Company of New York or Chicago—two different companies, are not they?

A. Yes.

156 Q. And what relation do they have, if any, to the New York Scaffolding Company?

A. They were the operating company.

157 Q. Will you explain what you mean by the operating Company?

A. One company does the business or held the patents, the other got out on the job and got the work, got it executed.

158 Q. That is, the Patent Scaffolding Company of New York and of Chicago, have a license to operate under the patents of the New York Scaffolding Company and lease the machines to the contractor? Is not that the fact?

A. They had the license and lease the machines.

159 Q. And the machines are all sold under lease, as distinguished from any outright sale by the Patent Scaffolding Company?

A. Renting machines.

160 Q. What is the American Safety Device Company, which Mr. Goepel has said owned the Murray patent to which I have called your attention?

A. It is the American Safety Device Company.

161 Q. What does it do—what is its business?

A. It is taking over the business of the New York Scaffolding Company.

162 Q. That is, it has taken over the entire business of the company, gradually?

A. As suits are closed, I suppose.

163 Q. You know that to be a fact?

A. That is what I believe.

164 Q. Has it taken over the Henderson patent in suit yet?

A. I believe it has. I won't say positively.

165 Q. That is your belief that the American Safety Device Company has taken over the Henderson patent?

Objected to—testimony as to belief.

(Objection withdrawn.)

By Mr. Lane: I will physically withdraw the question.

The objection is sustained.

166 Q. When was it that you first heard of Mr. Henderson and the machine which he was using in Chicago, when you had one of your numerous interviews with him concerning this matter?

A. I never had but two with him.

167 Q. When were those two interviews?

A. I cannot remember the year. I think it was in the early part of some year.

168 Q. 1910?

A. I think it was before 1910.

169 Q. It was before 1910?

A. Oh, I think some time before.

170 Q. How much, as near as you can recall?

A. A year or over. Some time before 1910.

171 Q. What were those conferences? To what did they relate, with Henderson or his then partner?

A. I wanted to make a business deal with Henderson, buy his business and hire Henderson to run our business in Chicago.

172 Q. And at that time you had been selling, the New York Scaffolding Company had been selling quite extensively the device like plaintiff's Exhibit No. 15?

A. I think not. We had been renting devices but considerably different, as I understand it.

173 Q. Just point out how different; you have that understanding which is very vague to me.

A. Yes, I explained that I paid little attention to machines. I would not know a Henderson machine from a Murray machine myself, but I could make a business deal with Henderson. I am a poor mechanic.

174 Q. Had the New York Scaffolding Company at the time of your interview, brought suit against Henderson or the Henderson Company with which he is connected, under patents which the New York Scaffolding Company owned?

A. I think not.

175 Q. You don't remember the three suits brought by your company against Mr. Henderson and users?

A. My recollection is that we brought suits against him, but I don't think at that time. It might have been.

176 Q. You did bring three suits against him and his users, prior to your acquisition of the Henderson patent?

A. I do not recollect.

177 Q. It was not after you acquired the Henderson patent?

A. I suppose not.

178 Q. Then it must have been prior? These suits were talked over during the negotiations for the purchase of the Henderson patent by the New York Scaffolding Company, were they?

A. I don't recollect.

179 Q. During the 35 years you have been in the scaffolding business, there have been some pretty large buildings put up prior to 1908, with scaffolds?

A. Yes sir.

180 Q. Some of the largest buildings in New York were put up with such scaffolds as you were talking about?

A. Some large buildings, yes.

141 181 Q. What kind of scaffolding devices did they use on these large buildings such as the Singer Building with timber, scaffolded the Woolworth building with timber, scaffolded the other buildings, buildings of that type, built prior to 1908?

A. Our company, the one I have been connected with for 35 years, scaffolded the Singer Building with timber, scaffolded the Woolworth building with timber, scaffolded other buildings.

182 Q. What company do you refer to?

A. Cheseboro-Whitney Company.

183 Q. What were these devices used generally in such structures as the Woolworth Building, by the Cheseboro-Whitney Company, prior to 1908?

A. The Woolworth Building was not built. We have done that

since.

184 Q. What type of scaffold was used to do the Singer Building? What type of scaffold was used prior to 1908, I would like to have explained.

A. We put out outriggers on the floors and build up scaffolding—make solid platform about every 9 feet, or at every story.

By the Court:

185 Q. Finish that one story you would go to the next, take the rigging down?

A. Sometimes you put out a number of them.

186 Q. Is the scaffold of the type shown in the Clarke patent, No. 673384, of May 7th, 1901, one of the type you refer to?

A. That we used?

187 Q. No, that was used on such high buildings?

A. This was used on high buildings.

188 Q. To what extent?

A. Oh, to say considerable extent—some extent at least I have seen it.

189 Q. It is one of the general forms that was used prior to 1908 on high buildings?

A. That was considered to be one of the first improvements over the wooden type, our old type.

190 Q. Did you ever operate under that patent?

A. No.

191 Q. But it was in competition with you prior to 1908?

A. Yes.

192 Q. And the Foster patented construction of June 21, 1904, was another one of the structures which were used for scaffolding high buildings, both by your company, the Chesboro-Whitney Company and others in New York?

A. We never used it. That was in competition with the Chesboro. This has been used on some high structures.

193 Q. And is still being used?

A. I have seen it on one building in the Middle West during the last year.

194 Q. You have seen it on other buildings prior to that time?

A. Yes sir.

195 Q. Numbers of them prior to 1908?

A. I have seen it on some buildings.

196 Q. Does the New York Scaffolding Company or the American Safety Device Company own this Foster patent at the present time?

A. The Safety Device Company.

197 Q. This was the patent that the American Safety Device Company sued one of the users of this Whitney Scaffolding Hoist Company for in Pennsylvania?

A. Yes sir.

198 Q. And in that case the court held the patent invalid? that a fact?

Objected to. No decree has been handed down in that yet in the district court.

A. I don't know.

By Mr. Lane: I am trying to show that this patent is asserted against the identical structure which is here charged to infringe—that is, they assert that the defendant's structure is an infringement of the Foster patent, in that American Safety Device Company suit.

By the Court: It raises a collateral matter. It cannot have greater force than the force of an admission. In order to get at its force as an admission it involves inquiry into that other case—putting ourselves in position of trying that case in order to get an accurate estimate of the admission, and force of the admission, if it is an admission.

By Mr. Lane: All I am trying to show is that the plaintiff itself has asserted this as covering the defendant's device here.

Exception by defendant.

By Mr. Lane: I offer in evidence the Foster patent No. 763,274 of June 21, 1904 as Defendant's Exhibit 9.

(Received and so marked.)

143 199 Q. The Murray patent No. 882,206 of March 17, 1908, is a patent owned by one of the companies with which you are associated, is not it?

A. I think so.

200 Q. You own the patent?

A. I believe so.

201 Q. In what company?

Objected to by plaintiff—these are matters of record.

The Court: The question is, the company with which he is associated. He may be associated with more than one company.

202 Q. Is the New York Scaffolding Company the owner of this Murray patent?

By Mr. Lane: I might say for the purpose of saving time, if plaintiff's counsel will admit that the Murray patented device and devices made under it, have been used by the New York Scaffolding Company, they will save questions.

By Mr. Goepel: (?) We certainly don't know whether devices actually like this were made in 1909 or 1910 by the company, and I do not know whether the assignment has ever been made.

By Mr. Lane: Will you admit the New York Scaffolding Company own this patent.

By Mr. Goepel: They did own it once, yes.

By Mr. Lane: And that devices have been made and sold under this patent since its issue?

By Mr. Goepel: We cannot admit it in just that way; but devices, overhead platform devices, under one or the other of the Murray overhead patents were used during some years, but exactly which structure, of which overhead patent, as there are two of Murray's, I do not know. I do know that Murray overhead structures were used.

By Mr. Lane: You admit that this patent No. 882206 was owned by the New York Scaffolding Company plaintiff at one time?

By Mr. Goepel: At one time.

203 Q. Do you know whether the device shown in that Murray patent was made or sold under the license of the Murray patent, at any time in the United States?

A. I do not know.

204 Q. I call your attention to the Murray patent No. 769395, of September 6th, 1904, and ask you to state whether or not this device has been manufactured and sold under license of the New York Scaffolding Company prior to 1908 and subsequent thereto?

A. I cannot tell you. That means very little to me.

Patents referred to offered in evidence by defendant and marked respectively Defendants' Exhibits 10 and 11.

205 Q. What connection have you with the Patent Scaffolding Companies, personally?

A. In all of them?

206 Q. The Patent Scaffolding companies over the country—the one in Chicago first?

Objected to by plaintiff as irrelevant.

By the Court: Go ahead, let us find out.

Exception by plaintiff.

A. I have no personal official connection with the Patent Scaffolding Company of Chicago.

207 Q. Are you a stockholder in that company?

A. No, I am not a stockholder.

208 Q. Are you a stockholder in the Patent Scaffolding Company of New York?

A. Yes.

209 Q. Are you an officer?

A. I am president of that company.

210 Q. And that company is the operating company under these various patents, as I understand your previous testimony?

A. Yes sir.

211 Q. And is that company the one that puts out this circular, Defendants' Exhibit No. 2?

A. It seems so.

212 Q. Do you remember when that was put out by the Patent Scaffolding Company of which you were president?

A. I don't remember just the date. May be 1912, 1913 or 1914. Any place along there. I do not attend to the printing.

213 Q. What office do you hold in the American Safety Device Company?

A. I am president of the American Safety Device Company.

214 Q. That is the company that you referred to as the one that is taking over these patents as the litigation progresses?

A. Yes.

215 Q. Are there any other scaffolding devices that are allied to these I have referred to, you were connected with in any way, as stockholder, director or officer?

A. In business of any kind?

216 Q. Yes sir.

A. I have been with the Chesboro-Whitney Company for 35 years.

217 Q. Any others besides those you have mentioned?

A. No, I think not.

218 Q. If I understand you correctly, the only companies you are actually connected with are the Patent of New York, of which you are president, the American Safety Device Company of which you are president, and the plaintiff, the New York Scaffolding Company as a stockholder, aside from the Chesboro Company?

A. I am treasurer of the Chesboro in competition with us, doing the same kind of business in a different way.

219 Q. The Chesboro is in competition with these companies of which you are president?

A. It is doing the old-fashioned form of scaffolding.

220 Q. And continuing to do it right along on high and other buildings?

A. Whenever they get a job. They can do anything.

221 Q. Do you remember when this circular Defendants' Exhibit No. 1 was put out by the Patent Scaffolding Company?

A. No. 1? No, I do not.

222 Q. Do you remember when this gold medal circular was put out by the Patent Scaffolding Company of which you are president?

A. I don't remember the year; but of course it would be quite sometime after these medals were awarded to the company.

223 Q. That is after November, 1910?

A. Yes, considerable time after, I should imagine, because it would take some time to get the pictures of these buildings. Some of them were erected after that.

224 Q. Probably had a good many of them on hand before that. didn't you?

A. Very few, I think.

225 Q. How long prior to May, 1908, were you acquainted with Mr. Murray who took out these various patents?

146 A. I never saw Mr. Murray but once. He came to the office of Chesboro-Whitney Company to get us interested in that suspended scaffold.

226 Q. What do you mean by "suspended scaffold"?

A. All these types we are talking about, the suspended against the other type built up from the ground.

227 Q. Was that, prior to the organization of the New York Scaffolding Company?

A. I suppose it must have been some time, because he came in the office, perhaps spent half an hour with us, he had drawings in there about every day. I was not at all interested. The next time I saw him was when they were forming the New York Scaffolding Company.

227 Q. At that time Murray was putting out devices which were operated by men on the scaffold, and with windlasses adjacent to the scaffold in pairs, was not he?

A. I don't know that. He was an inventor. He had a number of things he was seeing *seeing* in his head all the time and having drawings made and saying they were to be good things, he was wanting somebody to take up some of his ideas and work them out.

228 Q. You know he had actually put out some of these devices shown in his patent No. 854,959?

A. I don't know for a fact.

229 Q. He showed you some at the time you were having these interviews?

A. He had a number of schemes of different things, different drawings—which people will have.

230 Q. He had some of the devices?

A. He didn't have any of the devices. I never saw the device, didn't see it until—anything he had at all until long after that company was formed, myself, I didn't altho' I was president of the company.

231 Q. I suppose others had examined?

A. There must have somebody been working in closer connection with the mechanical end than I.

232 Q. Do you know who that was?

A. There was a man by the name of Bacher formed, as it were, the company.

Cross-examination:

233 X Q. You stated that you had little or nothing to do with the mechanical details of the devices that were taken over by the New York Scaffolding Company.

147 A. Nothing whatever.

234 X Q. The reason for that is that you were the head of the concern rather than the mechanical engineer.

A. I knew enough about scaffolding conditions, that is builders, closely connected with builders and people starting in this business, they wanted our influences, I suppose, and Chesboro-Whitney Company took a little stock in these new devices that came up that had never been seen before, and under my advice that they should keep track of things new, see if it was going to hurt our old business, and

before we got through they invited me to become president. I accepted the office with the understanding I would give it little attention.

235 X Q. Before that time and since have you been engaged in the interest of safety equipments, accidents to workmen and so on like? Was that one of the reasons why you became president of the company that was formed?

A. No, at that time I was more or less skeptical of this thing working out.

236 X Q. You mean the devices like those in issue?

A. Yes. I believed in the old-fashioned type rather, and so for a good while my connection was—I was afraid it might do me harm. Later, when I found it seemed to be almost fool-proof, and after we had it changed, and after we had the use of the new frame, I am very glad to say I am connected with it in the interest of safety. I spend a great deal of my time and a good deal of money, it is my hobby to better conditions in the business trade generally and I am glad to say I am getting some of it.

237 X Q. By the old forms you mean the forms that were composed of wood practically and horizontal bars and secured together the way they were doing for the last 35 years?

A. Yes sir, nailing them up and knocking them down—making a pretty secure scaffold if properly built.

238 X Q. You say these types of scaffold were used on the Singer Building, Woolworth Building. Were there not other forms used, as those like Exh. 15?

A. The Bricklayers used the platform machine on both buildings on the towers, on parts of the building.

239 X Q. The towers of the Woolworth Building were scaffolded by the old method that presented cupola surface, and the remainder of the building was scaffolded by the device of your company? Is that right?

148 A. By the device of the Patent Scaffolding.

240 X Q. You were asked about the painters' scaffold, and I asked you to make a sketch of that so we might know just what was in your mind when you described it.

A. I cannot make a sketch.

241 X Q. I understand your testimony to be that you were not engaged in the practical work of hoisting scaffolds like Exhibit 15 and others, but your knowledge and experience extended only in connection with the wooden scaffold? Is that right?

A. Not at all actively connected with the workings of this patent scaffold, but I am with my own old type.

242 X Q. When you spoke, or were inquired about the Murray type, what did you have in your mind when you answered those questions—"Murray type"?

A. I meant a platform machine of some sort, or the machines we had taken over from Murray, rather than the machines we had taken over from Cavanagh. We had never given it an official name, the men understood it.

243 X Q. You took over the Cavanagh machines toward the end of 1908, as you testified, and the Murray machines at the time the company was formed? Is that right?

(Objected to.)

That is, when you took over the Cavanagh overhead machine, they were known as Cavanagh type, and the Murray machines were known as the Murray type?

A. Yes. We took over Murray's first, a good many months afterwards took over the Cavanagh, the date I don't remember, I don't think I have stated.

244 —. What kind of machines did you take over from Murray at the time the company was organized?

A. I don't think I can describe them. Murray's machines some of them I think were riveted structures, other drums and angle iron across and we had a overhead worm gear, and we might have had more, we might have had something started, the company was experimenting and working along, I know that.

245 X Q. Why did you go to see Henderson as you testified?

A. Because our directors asked me to go out to Chicago and look over scaffolds, and I found the builder building the city hall in Chicago, he showed me a sketch he told me he had drawn, given to a man by the name of Henderson to have executed—Henderson—and he was going to have these machines made for his own work.

246 X Q. Did you at any time see Henderson under the advice of counsel and your mechanical engineers, about the purchase of the rights?

A. Yes, they wanted me to purchase the rights.

247 X Q. Do you know why?

A. Well, we wanted what he had, wanted the frame that he had revised, and you could do anything you wanted to with the scaffold.

248 X Q. You were shown the Clarke patent. Briefly state what the disadvantages are of that patent.

Objected to by defendant's counsel. The witness has repeatedly stated he was not sufficiently familiar with the mechanical construction to point out the advantages or disadvantages of a certain structure, and incompetent and immaterial.

Objection overruled. Exception.

A. I received my impressions from the builders that used these different things, bricklayers and laborers, not from the mechanical engineers.

Objected to as secondary evidence, and hearsay.

By the Court: I do not believe you need take much time in discussion of the proposition that the scaffold like Henderson's or Murray's has advantages which this scaffolding does not possess.

249 X Q. Does this picture represent the scaffolding about which you have testified you have been doing about 35 years?

A. We build those horses and make those types, the laborers put them together. That is not the kind, when we talk about building a scaffold that is not our kind.

250 X Q. Was that the way the laborers put these things together on the jobs during all these years?

A. Yes sir, they did.

251 X Q. You were asked about the Patent Scaffold Company of Chicago. What territory does the Patent Scaffolding Company of New York have?

A. I cannot tell you the lines of territory.

252 X Q. One has the eastern division and one the western division of the United States?

A. I think so. One operates one place and one another.

Mr. Goepel: I offer in evidence this little cut as showing the type of scaffold the witness testified about.

150 Objected to as incompetent, irrelevant and immaterial, the witness has not identified it.

Marked "Plaintiff's Exhibit 24."

Received. Exception.

Redirect examination.

By Mr. Lane:

253 Q. When was the Singer Building built in New York—prior to 1908?

A. I don't know.

254 Q. You have no recollection of that at all?

A. No, there are so many buildings in New York, we do a little on all of them, or a good many of them.

255 Q. When was the Patent Scaffolding Company organized—of New York, of which you are president? Could you find out that date and tell me?

A. I surely could after I am released, but my counsel won't talk with me. He has papers I expected to get, but I didn't see him.

256 Q. I asked you yesterday to look up and ascertain when the Patent Scaffolding Company, or New York Scaffolding Company, put up devices like plaintiff's exhibit 15. Did you do so?

A. I tried—I expected to do so. I went right down to the hotel and spoke to Mr. Goepel. He said "our relations are quite different, you are a witness for Mr. Lane, I can give you no advice." In fact, he said it was not a right practice to talk together or to eat together, and I have just been bumming around. I asked him in the evening if he would take an automobile ride I had arranged and he refused, and also Mr. Blum.

257 Q. I would like to have you find out when Plaintiff's Exhibit 15 was actual-y put out by the Patent Scaffold Company, or New York Scaffolding Company.

A. I will try to do it.

By the Court: I think he was right in doing what he did.
By Mr. Lane: He might have looked it up, however.

(Mr. Goepel states he will look it up.)

Witness: I have not a single thing here from which I can get the information.

By Mr. Goepel: Do you still want Mr. Davidson to do that?

151 By Mr. Lane: Yes.

Witness: I don't see how I can do it. I will try and do it.

By Mr. Go-pel: Do you want him to dig further, or don't you?

By Mr. Lane: I would like him to find out the date when the Patent Scaffolding Company or the New York Scaffolding Company first put out devices substantially like Exhibit 15, or any device which has substantially a U-shaped frame with the bar running across at the bottom of that frame and horse supported putlogs at right angles to the building.

By the Court: Make such search if you are able.

Witness: I will.

258 Q. Do you know what kind of devices were actually used on the Singer building?

A. I can't remember what kind it was. Some sort of hanging scaffold.

By Mr. Lane: The overhead—I would like that to appear, this witness does not know exactly what kind of devices were used there.

By the Court: I don't think he attempted to draw any distinction.

Witness: I may be wrong in my answer. I think it was the Cavanagh overhead machines.

Testimony of Elias H. Henderson.

ELIAS H. HENDERSON, called by defendants, being sworn, testified:

Examined by Mr. Lane:

1 Q. Where do you live?

A. 6138 South Main Street, Chicago, Illinois.

2 Q. Prior to 1909, what had you done in the way of educating yourself?

Objected to by plaintiff's counsel, this line of testimony unless set up in the answer. Any knowledge this witness may have of the public use of the patent in issue or any other knowledge except set up in the answer.

Overruled. Plaintiff excepts.

A. I had attended grammar school in Chicago, Hyde Park high school, Stern's academy, Chicago Business College, been appointed to the United States Naval Academy by Mr. Christensen, congressman of the second district, attended that academy for
152 three years and ten months. I attended the University of

Chicago and University of Chicago law school. I was admitted to the bar in 1910.

3 Q. Will you state when you first acquired any knowledge of the scaffolding business and how it came about?

A. The first time I had any occasion to consider scaffolding of buildings was about in February 1910—February 1909. I was having dinner with Mr. Merrill, then president of the Noel Construction Company, and I explained to Mr. Merrill a certain gas engine I was designing attempting to get a patent at that time, and Mr. Merrill, whom I had known while I was at the academy at Annapolis, put up to me a proposition of scaffolding on the city hall, which the Noel Construction Company was then building in Chicago, and explained to me the great expense of building up a scaffold from the ground, and stated that it was much more convenient and cheaper to scaffold by swinging the scaffold from an overhead outrigger. He said there was such a scaffold in use and being put up by a New York concern, but that the rental charged by the New York concern was prohibitory of its use on the city hall, and said with my mechanical training I ought to be able to devise a means of swinging a scaffold, and instructed me to go ahead and see what I could do.

4 Q. When was this?

A. It was in February 1909.

5 Q. How do you fix that date?

A. Well, it was after the end of the winter semester of the University of Chicago, after the examination I had about two weeks' vacation, and the examination took place somewhere between the 1st and the 10th of the month.

6 Q. How long after these examinations was it you saw Mr. Merrill?

A. Two or three days after that.

7 Q. That was in Evanston?

A. In Evanston at his house.

8 Q. Go ahead with what happened next after that interview?

Objection renewed on the ground this witness is estopped, and also not set up in the answer.

By the Court: He has a patent.

By Mr. Lane: I want to show from what the patent evolved—the invention evolved, as showing the scope of the patent. This
153 witness will testify he had seen this New York Scaffolding devices before he had any conception whatever of the device that he has invented here—if there be invention—and that he examined those carefully sometime prior to the time he conceived anything along this line, and that the construction which is here before you as plaintiff's exhibit No. 15, is one of those constructions in use at that time.

Mr. Blum: That brings up the question of public prior use. That is not set up in the answer.

By the Court: The question here is when did structures like Plaintiff's Exhibit 15 first come in use.

Ruling reserved on the objection.

9 Q. Did Mr. Merrill call your attention to any scaffolding devices that were made by the New York Company to which you have referred, that were then in use in Chicago.

Objected to by defendant as hearsay.

By the Court: He may answer yes or no. The objectionable part of the question is the reference to where they came from.

10 Q. Did Mr. Merrill call your attention to any devices that were then in use in Chicago?

A. He did.

11 Q. And where were they located?

A. On the Blackstone Hotel in Chicago.

12 Q. Did you shortly after that interview with Mr. Merrill, go down to the Blackstone Hotel to examine the scaffolding devices which were then in use on that hotel—the construction of it?

Objected to as grossly leading.

By Mr. Lane: I withdraw the question.

By the Court: It may stand.

A. I did.

12 Q. Will you please explain just what you found on the Blackstone Hotel then in course of construction, so far as the scaffolding devices were concerned?

A. On the north side of the building there was a scaffold suspended by overhead outriggers, cables led down to a drum, the cable passed over a little pulley wheel on the top cross member of the scaffold down to a drum, and the drums were in pairs opposite at right angles to the building. These drums were supported above a U-frame which was held in place, bolted, with two angle irons, the cables passed thro' the U-frame, and then the planking were laid along the scaffold on top of the angle irons which was bolted to the U-frames and the drums were operated by means of the ratchet lever, to which the men put a pipe, making an extension, and pumped it up and down.

13 Q. Just how were the putlogs supported relative to the U-frame concerning which you have testified?

A. The putlogs were bolted alongside of the U-frame and the cables passed through the U-frame.

14 Q. Did you see the machines operate?

A. Yes, the men were laying bricks along the scaffold, a couple of laborers hoisted one end of the scaffold.

15 Q. So you saw it raised during the time you were there?

A. Yes, sir.

16 Q. At that time had you done any work on what later developed into your patent in suit?

A. I had not.

17 Q. What followed your seeing this device at the Blackstone Hotel?

By Mr. Blum: I suppose that objection of mine is continued.

By the Court: The objection may stand to all this testimony. I will reserve my ruling.

A. I didn't do anything further until about the middle of May. Mr. Merrill called me up and asked me to come down to the office. I went down and he asked me if I had a scaffold ready for him, or had any ideas. I told him no, that I had not. He said, "I have been depending upon you to design something, and I have got to have something." So he called in Mr. Peterson, the superintendent, took me over to the city hall and showed me the wall he wanted, the scaffold in the court there, and I then went over to Carpenter Company and inspected some winches he had there to see if it was practicable to bolt the winches to wooden putlogs. And owing to the fact that Carpenter & Company wanted more money than Mr. Merrill could pay, for scaffold, didn't make a deal with him. Then I went home and made up the design for the scaffold that I subsequently applied for a patent on, and took it down to Brown & Williams' attorneys, and asked them if I could get a patent on it. They thought I could. Mr. Merrill said he would have Parker & Carter investigate if there would be no infringement on the winch, and instead of bolting the windlass to the putlog, I found I could utilize pieces of 2 x 10 around the building for putlogs and place them in the U-frame, and would make the scaffolds easier to put

155 into the building and much simpler to dismantle—take off.
18 Q. Where did you get your knowledge of the U-frame being used in this line of work?

A. I saw U-frames on the Blackstone Hotel. It is just an ordinary stirrup. *

By the Court: I don't suppose it is competent for a patentee to tell where he got his ideas. It don't make any difference where he got it from, the U-frame of course is old.

By Mr. Lane: I was attempting to show the knowledge he had of this form of device was first acquired from the devices here.

By the Court: That is not proper.

By Mr. Lane: I think we might show where his knowledge came from. What he has done is to turn the thing around.

19 Q. How many pairs of these U-frame windlasses were used in connection with the scaffolding which you saw at the Blackstone Hotel in February of 1909?

Objected to. Witness has not said February 1909.

He has not given any date up to the present time.

(Question withdrawn.)

20 Q. When was it you saw the scaffolding construction which you examined on the Blackstone Hotel in Chicago?

A. In the latter part of February 1909.

21 Q. And how many pairs of these scaffolding device were there on that Blackstone Hotel in use—on the building at that time?

A. Extended around the north and south side, the north and the west side of the building I should judge there were about 40 pair, I should say, that is my recollection.

22 Q. Are there any U-shaped frames here in the court room and windlass devices which are similar to those which you saw at the Blackstone Hotel in February 1909?

A. That is the machine lying on the floor there, exactly similar to the machine, to all outward appearances.

23 Q. Examine this carefully and see how it compares with Plaintiff's Exhibit 15, and compares with the construction you saw at the Blackstone hotel in February 1909.

A. They are the same machine.

24 Q. Will you explain to the court how these were arranged relative to the wall of the building as then going up, in February 1909 in Chicago?

A. The machine was placed at right angles to the building, the wall of the building was here (indicating) the machine was placed in that position, and the putlog was bolted along at right angles to the building. There were bolts running through here, and the angle irons ran down—the wall of the building was along here, the machine set in this position, and the angle iron was bolted to the machine—at right angles to the building and frame was laid parallel to the building.

25 Q. Will you explain a little more clearly just how the putlogs were placed and supported relative to the windlasses?

A. One machine was in that position, there would be another machine over here, and an angle iron would be laid along this side and this side of the U-frame and bolted to it, bolted through and the angle iron was along side of the U-frame down underneath the bolt. Here was an angle iron bolted on this side, and on that side, the bolt extended through.

(The witness had his hand on the corner of the angle iron.)

By the Court: Where was the bolting done?

A. The bolt went through there.

— Through the U-frame?

A. Through the U-frame.

26 Q. Through what part of the U-frame? Lower or side part.

A. Through the bottom part of the frame, the bottom part of the frame locks against the bolts.

27 Q. Was the iron angle notched to fit the side of the frame?

A. No.

28 Q. How did the angle iron get by the side of the frame?

A. It came in that manner, and the angle extended out that way. There was an angle iron on each side.

29 Q. The bolt ran through the sides of the frame?

A. Ran through the perpendicular part of the angle.

30 Q. And rested on the bottom of the frame?

A. Rested on the bottom of the U. Frame.

31 Q. It was not bolted through the frame itself?

A. The bolt passed through the U-frame, yes sir.

32 Q. Did the bolt pass through this piece of iron here?

A. No, it passed through the U-frame.

— Q. And rested on the bottom of the U?

A. Rested on the bottom of the U.

33 Q. And at one side, it caught one side of the angle the side of the angle in the plate of the U and on the other side into the other side?

157 A. Yes, that is it exactly.

34 Q. That is true of both sides of the U-frame?

A. Yes sir.

35 Q. Two sides the bolts?

A. Yes.

36 Q. Any bolt below the U?

A. No, no bolts below the U.

By Mr. Lane:

37 Q. How does the construction shown on page 11 of Defendant's Exhibit 2, compare with the structure you actually saw on the Blackstone Hotel in February 1909, so far as this bolting is concerned? (Patent Scaffolding Co. circular.)

Objected to by plaintiff as leading—showing witness a picture. Objection overruled, Plaintiff excepts.

A. The structure of the scaffold is the same, exactly the same as I saw on the Blackstone Hotel. The outrigger on the Blackstone Hotel was composed of two timbers bolted together and the cable extended down between the timbers with a bolt through an eye on the top.

38 Q. I am speaking of the device below the outrigger, how does that compare with what you found there?

A. It is an exact reproduction of the device I saw at the Blackstone Hotel.

(Noon Recess.)

May 31—2 p. m.

Direct examination of the witness Henderson resumed.

By Mr. Lane:

39 Q. How does the picture on page 13 of Defendant's Exhibit 2, compare with the use of the structures which you saw in February 1909 on the Blackstone Hotel building?

A. They appear to be identical.

40 Q. I hand you two drawings and ask you to state how these drawings compare with the structure of the devices you saw at the Blackstone Hotel in February 1909.

A. The structures are identical with these I saw at the Blackstone Hotel in February 1909.

Counsel for defendant now offers in evidence the drawings just referred to.

By Mr. Blum: We do not object to the drawings, but there are statements on — I have not seen.

158 (Hands drawings to Mr. Blum.)

Marked respectively as Defendants' Exhibits 13 and 14.

41 Q. Are the parts properly marked on that drawing, on the 13, as actually used in the building? Is the marking correct?

A. They are—the structure of the scaffold is identical, the outriggers, the top is different.

42 Q. In 14, do the statements correctly state what you saw there in the position of the parts?

A. They do.

43 Q. What was your purpose in going to the Blackstone Hotel in February 1909, to examine these structures, and how closely did you examine them?

A. My purpose was to ascertain the method of swinging scaffolds from the outrigger overhead, and I examined them in detail. I paid particular attention to the structure and means by which they were fastened and the mechanical details as to the manner in which the cable was strung overhead down from the pulley, the drum, and also the manner in which the dogs were attached and fastened.

44 Q. How much prior to the date of your application for your patent in suit, 1909, did you conceive of doing any work on the constructing of the scaffolding device shown in this patent?

A. It was about ten days before I made the application.

45 Q. Did you do any work prior to that time on it?

A. No, I did not.

46 Q. That would be during the first part of June 1909 that you did your first work on this device?

A. Yes sir.

47 Q. And the patent is your patent No. 959,008 of May 1910, which I now hand you, you have just referred to?

A. Yes sir.

48 Q. What was done with that device which you applied for a patent for, in June 1909 by builders?

A. The first use was on the city hall in Chicago, by the Noel Construction Company. They used about 50 pair, or 100 perfect machines.

49 Q. And those were the machines you furnished to Mr. Merrill who suggested you take this matter up?

A. Yes sir, those were the machines for Merrill.

50 Q. What did you do with those devices shown in the Henderson patent after the use on the Chicago building?

159 A. The particular machine?

51 Q. What did you do after that—what was the next thing you did?

A. I next built about 100 machines for A. S. Wilson, Pittsburgh.

for use on the Locomotive Brotherhood of Engineers' Building in Cleveland.

52 Q. For how long after that did you put out a few of these devices?

A. We put out the devices until March 1912.

By Plaintiff's Counsel: Is not this somewhat irrelevant and immaterial to the issues here?

Defendant's Counsel: I am attempting to show that the devices of the Henderson patent were taken out shortly after the starting of suit against Henderson under this other patent, which they had been operating under prior to it and which was the device they are trying to build commercial success under, and that Henderson was forced out of the market and the machine junked and never used after that because of the impracticability of it. That is the statement of the plaintiff itself, that it was impracticable, by its officers, and that the Murray device, which was the commercial one, the one used to-day and has been all the time, except for sporadic use of Henderson subsequent to the application for patent. It seems to me to go directly to the equity of this case. It turns the scale in every case in favor of the invention where there is any doubt of the patentability of the device by the failure of commercial success of the device itself. Testimony received subject to the objection.

53 Q. After you had put out some of these devices on the building in Chicago and elsewhere, what was done if anything by the New York Scaffolding Company as to your manufacture and sale of this device?

A. Mr. Bachers, who was the agent and representative of the New York Scaffolding Company, called on contractors whose work I was bidding on, some to whom I was furnishing scaffolding, and threatened suit for infringement.

By the Court: Were you present?

A. I was not.

54 Q. Did anybody tell you?

A. The contractors who I talked to.

By the Court: That is hearsay.

55 Q. What you know of your own knowledge is simply
160 what happened to you in connection with these devices—
you and the Henderson Company?

A. Mr. Corne went with me—

56 Q. Who is Mr. Corne?

A. He was a director in the New York Scaffolding Company, and also represented the Trenton Steel & Iron Company—called on me and tried to sell me wire rope and scaffolding, then later on, in the evening, said that he had come from the New York Scaffolding Company, and made an appointment to meet me and Mr. Davidson at Mr. Junge's house, the next evening.

57 Q. Who is Mr. Junge?

A. My partner. And we met at Junge's house the next evening.

By the Court: When was that ?

A. About October 1909. Mr. Davidson Mr. Corne told us Mr. Davidson, was the president of the New York Scaffolding Company—we could not go along and do business, that we were inexperienced, and that they had used a device similar to the one we were putting out and discontinued the use of it; that they had had about 100 machines with the crank and gear drum, and it was impracticable, and also said we were cutting off our last opportunity and lower the price of scaffolds by selling the machines, and urged us to combine and form a monopoly, and wanted us to discontinue to use the machine we were then using.

58 Q. What were those machines?

A. The ones like the Henderson patent. And organize a company and use the Murray machine exclusively.

59 Q. You mean the one you saw in 1909?

A. Yes, sir.

(Objected to as leading.)

By Mr. Goepel: There is one question that escaped me—"Like the Henderson patent." Objected to.

By the Court: The criticism is good.

60 Q. What then was said during these conferences latter part of 1909, by Davidson or others at that conference?

A. Well, we agreed to meet the next evening, and they were going to put up a plan to me whereby we were to operate the western territory, that is, west of Pittsburgh, and the New York Scaffolding Company was to operate east of Pittsburgh, and I met Mr. Davidson and Mr. Bacher at the Great Northern Hotel the next evening and they, among other thing- wanted me to take stock in the New York Scaffolding Company or organize another Company; that they wanted the controlling stock, and I would not agree to that. They also offered to make me western manager, but I refused. I told them if I could not have control of the Company and benefit of the business I had built up in Chicago that I would not make any agreement with them.

By Mr. Blum: Objection to the answer as stating a conclusion, as showing the evident bias of the witness in volunteering answers beyond the questions. The answer is not responsive. The question is, what did they say?

By the Court: It strikes me we are a long way from the issue on trial here. Let him state what was said in those conversations.

61 Q. What was said by Mr. Davidson or Mr. Bacher as to what machine was to be handled by you in the western territory?

A. They requested that I use the Murray machine exclusively, or store, or junk, or discontinue the machine I had already manufactured.

62 Q. What reason did they state for wanting you to discontinue?

A. They said they were unsafe and unreliable.

63 Q. Did you or did you not, enter into any negotiations at that time with the New York Scaffolding Company or any of its officers?

A. I did not.

64 Q. What followed shortly after that in the way of suits being brought by the New York Scaffolding Company against you for infringement?

A. Shortly after that the New York Scaffolding Company sued the Henderson Scaffolding Hoist Company for infringement.

65 Q. Do you remember under what patent?

A. I don't remember the patent, under what patent that suit was brought. At the same time they sued John Griffiths for using my machines, and the two suits were under two different patents.

(Objected to as hearsay.)

By the Court: You are wasting time here.

Mr. Lane: In what way?

By the Court: He don't know what patent it was.

162 66 Q. Shortly prior to, or about the time those suits were brought what if any further negotiations were had, and what reasons given for your discontinuing the manufacture and sale of the devices which you were putting out in Chicago at that time?

By Mr. Blum: Objected to, calling for a conclusion. If the witness is asked what he saw or heard, that is another matter.

Objection sustained. Defendant excepts.

67 Q. Was there any other conference had between you and the officers of the New York Scaffolding Company after suits had been brought for infringement by manufacture and sale of the Henderson device?

A. I saw and talked with Mr. Bacher on several occasions, and when I was bidding on work in Chicago.

68 Q. Who is Mr. Bacher?

A. He is the agent and western manager of the New York Scaffolding Company.

By Mr. Blum: Objected to, the former question as not responsive.

69 Q. What was said by Mr. Bacher as to the discontinuance of the Henderson devices which you had been putting out?

Objected to as utterly immaterial to bind the plaintiff herein. Can't prove agency by what the agent did or said.

Objection sustained. Defendant excepts.

70 Q. Did Davidson have any further negotiations with you about discontinuing this scaffolding device?

A. No, he did not.

71 Q. What was the consummation of the negotiations and these suits that were brought against you?

Objected to as a conclusion.

Objection sustained. Defendant excepts.

72 Q. Do you know what happened relative to discontinuing the manufacture and sale of your devices after your patent was obtained, by the New York Scaffolding Company?

A. I don't know what disposition was made of the machine.

73 Q. What consideration was paid by the New York Scaffolding Company for the Henderson patent?

A. I don't know.

74 Q. Were not you paid?

A. I sold the stock of the Henderson Scaffold Hoist Company to Junge, Ludormer & McMinn.

75 Q. What was your reason for selling that stock?

Objected to by plaintiff as utterly immaterial.

Objection sustained. Defendant excepts.

By the Court: What did you get for it, Mr. Henderson?

A. I got about—I paid the debts of the Henderson Scaffold Hoist Company, and the nominal sum was \$10,000. I owed Mr. Judge about \$2,000, which was deducted from that; then there was about \$5,000 that was paid for cable and indebtedness of the Henderson Scaffolding Hoist Company, cleaning up all their indebtedness. I realized a little over \$3,000.00.

76 Q. What if any threats were made to you by officers of the New York Scaffolding Company, as to their forcing you out of business if you did not sell?

Objected to as immaterial in this court.

By the Court: How is that material?

By Mr. Lane: It shows the way in which the plaintiff obtained the patent.

Objection sustained. Defendant excepts.

77 Q. What was the total number of these machines—of the Henderson machines—that were made by you or the Henderson Company?

A. Estimated about 1,000 machines all together were manufactured by myself and the Henderson Scaffold Hoist Company.

By the Court: In what period of time?

A. From July, 1909, until the date I sold my stock to them.

78 Q. June, 1911?

A. March, 1911.

By Mr. Blum: You testified March, 1912, a little while ago.

Witness: The assignment to the New York Scaffolding Company was executed subsequent to the time I sold my stock to them; that was executed by the new officers of the company.

By Mr. Blum: He said 1912 was the date. I have the notes.

Witness: I want to correct my testimony; that I didn't sell any after March, 1911.

164 Cross-examination.

By Mr. Goepel:

79 X Q. You did have difficulty in putting upon the market devices like those you testified to, the 1,000 machines, and which are shown in Plaintiff's Exhibit No. 18?

A. Yes, I had difficulty, considerable of it.

80 Q. Didn't have any difficulty with the operation of the machine did you?

A. I never operated the device.

81 X Q. Ever have any complaint about your devices?

A. One down in Moline, Illinois.

82 X Q. Others of the 1,000 machines you didn't have any, did you?

A. None that I can recollect at the present time.

83 X Q. When you were at the Blackstone Hotel did you go up on the platform?

A. I did.

84 X Q. Did you take any of the devices apart?

A. I didn't take any of them apart. They were hanging on the scaffold.

85 X Q. All of them?

A. All that I saw.

86 X Q. About how high were they at that time?

A. They were up about to the 11th or 12th floor.

87 X Q. Did you get permission to go on the platform?

A. No, I didn't. I simply went up and into the building.

88 X Q. About how long were you there?

A. I was there I should judge a half hour.

89 X Q. Is that the only time?

A. That is the only time.

90 X Q. And after that you conceived the idea you have testified about to-day?

A. I did.

91 X Q. Were the men on the platforms when you were there?

A. They were.

92 X Q. Did you see them operate them?

A. I did.

93 X Q. Please describe what took place when you saw the men operate.

A. The men put the pipe handle into the lever and pushed down on it and raised the machine.

94 Q. How many men did you see do that?

165 A. Two.

95 X Q. How many machines did you see operated that way?

A. There were about six machines.

96 X Q. You saw actually operate?

A. Yes sir.

97 X Q. Of those six machines, were those all in one line or were they opposite to each other on the putlogs?

A. All in one line? I don't get your question.

98 X Q. Were the six machines you saw operated as you said, were they arranged close to the wall of the building or at the outside of the putlogs?

A. They were opposite in pairs.

99 — Q. You mean three pairs?

A. Three pairs.

100 — Q. And you saw the men operate the six machines belonging to three pairs—is that right?

A. Yes sir.

101 X Q. Which one of these six did he operate first?

A. I could not say which one he operated first.

102 X Q. Did he operate the three on the outside of the putlog before he operated the three on the other side?

A. He operated the two together, the two pieces of pipe. He shoved down on one and then on the other.

103 X Q. Then he straddled a putlog and took one lever in one hand and the other lever in the other hand and operated both together?

A. No, he was considerably off to one side of the putlogs.

104 X Q. He stood so he could grab both of the levers?

A. Yes sir.

105 X Q. And did that with the aid of the arms?

A. Yes sir.

106 X Q. So that by his operation of the levers the putlog was raised? Is that right?

A. Yes sir.

107 X Q. Did you pick up any of the planks of that platform near the frames of the machine?

A. I did not.

108 X Q. Did you go down on your knees near one of the frames of these machines?

A. I didn't go down on my knees. I stooped down and looked underneath.

109 X Q. You put your head underneath the plank?

A. No, I looked out of a window.

110 X Q. Where was that window?

A. There was a number of windows along there, the scaffold is up about four feet above the floor.

111 X Q. Did you manipulate any of the bolts you testified about?

A. No, I didn't touch any bolts.

112 X Q. Then all you saw of these scaffolding devices you testified about in your direct, was what you saw from this window? Is that right?

A. Saw it from the window and got out on the scaffold.

113 X Q. I mean, so far as the lower part underneath the platform planks are concerned, that is all you saw and when you looked out of the window?

A. Yes sir.

114 X Q. How far away from the window was the platform?

A. I should judge the platform was 8 to 10 inches.

115 X Q. I don't mean how far the platform was away from the wall of the house, but how far was the platform away from you when you looked at it underneath as you say?

A. I should judge three or four feet. I didn't measure, about three or four feet.

116 X Q. Was any one with you when you looked?

A. No.

117 X Q. All alone?

A. All alone.

118 X Q. And you didn't touch those bolts, did you?

A. No.

119 X Q. About where did you stand at the window? Between the two putlogs, or directly underneath one of them?

A. I don't remember whether directly underneath or a little to one side.

120 X Q. You are absolutely certain you did not see one of these devices down on the ground?

A. No sir.

121 X Q. You are certain of that?

A. Yes sir.

122 X Q. No doubt whatever in your mind?

A. No.

123 X Q. Did you stand between any of those pairs of frames and move the platform away or toward the building in any way?

167 A. No, I did not.

124 X Q. Did you push the platform away from the building?

A. I did not.

125 X Q. When those men pumped up those drums by the lever, did you notice anything particularly?

A. No, I can't say I noticed anything particularly.

126 X Q. Just the ordinary thing that you would expect? Is that right, when the men are pumping and raising the platform?

A. I suppose it was what I would expect.

127 X Q. It is a fact, is it not, that those bolts that you saw, were fastened to the frames of those machines?

A. I don't know whether they were fastened to the frame, because I could not see the exact point of contact on the frames; but the bolt passed through the putlog, and the frame of the machine passed down underneath the bolt. I don't know of any practical way of fastening the bolt to the frame.

128 X Q. From the facts as just stated, you assumed that the thing was as you testify? Is that right?

A. I saw it assembled in that manner. Of course I naturally concluded it was the way it was done, because I saw it.

129 X Q. And your engineering knowledge enabled you to put the thing together?

A. I saw the *the* bolt and saw the frame through there—

130 X Q. How did you see the bolt through the frame, when the wood covered up the bolts and angle iron covered the bolts?

A. I saw what was ahead of the bolts and the nut on the other side and presumed the bolt went through the iron.

131 X Q. It was fastened to the frame—is that right?

A. I didn't see it fastened to the frame.

132 X Q. Do you deny it was fastened?

A. I don't deny it was fastened, no.

133 X Q. Now, when you looked at these things from the window, the lower part of the angle iron which is the lower part of the frame which is flat, as you said, that covers up the bolts when you look from underneath, does it not?

A. Yes.

134 X Q. And the one surface of the angle-iron, or one leg of the angle iron, also covers up the body of the bolt, does it not?

168 A. Yes.

135 X Q. So all you can see when you look out from below, is the head or the nut of the bolt? Is that right?

A. Yes.

136 X Q. You cannot see whether the bolt itself does go through any metal web portion of the frame?

A. No sir.

137 X Q. Anything you say about going through, would all be guesswork? Is that right?

A. Well, according to my knowledge of engineering, they don't make any flat iron with webs and bends of iron; so it would naturally be a conclusion in observing a structure of that kind, it would naturally seem they had a U-frame pass down around underneath the bolt.

138 X Q. Did you manipulate that with your hand, the nut or head of the bolt?

A. No.

139 X Q. You don't know whether those bolts were loose or tight, do you?

A. They appeared to be tight, otherwise they would not hold the angle irons.

140 X Q. Well, but you don't know as a fact, do you, whether those bolts were screwed on tight, or were loose?

A. No, I do not.

141 X Q. Did you make any sketch that day you were there?

A. I think I did make a sketch.

142 X Q. What became of it?

A. I don't know.

143 X Q. Hav-n't got it in your possession now?

A. No.

144 X Q. Did you make a sketch of your conception of the invention in May 1908?

A. Yes sir.

145 X Q. What became of that sketch?

A. That was a little paper, it was in a large pile some place in the basement.

146 X Q. Do you remember dating it?

A. Yes sir.

147 X Q. When did you see it last?

A. About a year ago—no, it was later than that. About October last year.

148 X Q. What date did you put on?

A. The date I made the sketch.

— Q. What date was that?

169 A. I don't remember the exact date.

149 X Q. When you gave your testimony to-day you gave it of your own recollection of the date of conception. Is that right?

A. Yes.

150 X Q. The same thing applies when you state you saw these things in the Blackstone Hotel—just your own recollection?

A. Yes, my recollection.

151 X Q. How is it that you did not testify to this when you was called as a witness on behalf of the defendant in the case of the New York Scaffolding Company against Liebel-Binney, when you gave your deposition in Chicago?

By Mr. Blum: Objected to as calling for a conclusion.

A. I don't think anybody asked me about it.

152 X Q. Don't you remember testifying about the New York Scaffolding Company machines?

A. Yes, I testified about the machines.

153 X Q. Now, how do you know that those machines were the New York Scaffolding Company machines that you said you saw at the Blackstone Hotel?

A. Well, they were the only people doing scaffolding that I know of in Chicago at that time.

154 X Q. You will not swear those machines were the property of the New York Scaffolding Company, will you?

A. I can't say from my own knowledge, only from information given me by Mr. Bacher.

Objected to as hearsay.

155 X Q. You don't know, anyhow, do you?

A. No.

156 X Q. You did not make these drawings that were offered in evidence as Defendants' Exhibits 13 and 14?

A. I did not.

157 X Q. They were made by counsel and then shown to you? Is that right?

A. The first time I saw them was here.

158 X Q. The first time, today?

A. Yes sir.

159 X Q. During the time that—say about 1910, 1911 and 1912 and 1913 and 1914, and up to to-day, you have seen devices of Chicago that had U-shaped frames and platforms and angle irons, have you?

A. Yes sir.

170 160 X Q. You saw them on all the large buildings whenever you saw any under erection?

A. Yes sir.

161 X Q. Quite a number of buildings have been built during those years in Chicago?

A. Yes.

162 X Q. And more of these platforms, U-shaped frames and angle irons?

A. I didn't observe all the buildings. All of them had scaffolds I think and U-shaped frames.

163 X Q. The way you described it to day?

A. I don't know if exactly the same, because I didn't go up on the buildings as I did on the Blackstone Hotel.

164 X Q. The general impression on you is that they were substantially the same?

A. Substantially.

165 X Q. The time you were negotiating with the New York Scaffolding Company as you said, you noticed some of these devices, did you not in Chicago?

A. Yes, I noticed some of them at the time I was negotiating with them.

166 X Q. The fact you were negotiating about your patent, made you specially observant, did it not?

A. Yes sir. I observed them.

167 X Q. Coming again to that Blackstone Hotel that had as you say the wooden platform and vertical sides of the hoisting mechanism—is that right?

A. Yes sir.

168 X Q. And you said there were two angle irons?

A. Yes.

169 X Q. How could you see the inside of the structure between the angle irons and the wooden platform?

A. How could I see it? I could see it. I took particular notice. The angle part of the plank where the iron goes in between was cut away.

170 X Q. How far was that cut away?

A. I don't remember exactly how far.

171 X Q. Far enough to see the bolts?

A. I don't remember.

172 X Q. Put your finger into it?

A. No, I didn't put my finger, I got down and looked very closely and observed the construction and the details.

By the Court: Ever seen that structure before that day?

A. I have not.

171 "Q. The first time you ever saw one?

A. Yes sir.

"Q. You were not acquainted with the general features of the mechanism?

A. I was not acquainted with the general features prior to that time.

173 X Q. Did you see any overhead machines before you saw this at the Blackstone?

A. No sir.

174 X Q. The first scaffold device you ever saw? Is that right?

A. This was.

175 X Q. How was it possible for you to see from that window the bottom of that U-shaped frame, when the legs of the angle iron extended below it in such a way as to have the legs of the angle iron impede your vision of the lower parts of those frames?

A. Well, how far they extended below, I moved around and saw the angle iron about—I mean the frames and scaffolds was about 2 inches wide or an inch and a half and supported the angle irons that distance, so I could naturally see the angle irons extend upwards.

176 X Q. The angle irons extend upward?

A. The U-shaped frame extended upwards between the angle irons.

177 X Q. How far up did it extend?

A. It extended to the top of the machine.

179 X Q. How far up between the angle irons?

A. From the bottom I could only see probably an inch; but in looking down I could see from the top of the machine down to where it turned on the bend.

180 X Q. How far was the bottom of this U-shaped frame below the angle irons?

A. It was not below the angle irons.

181 X Q. How far was it below the top surface of the angle irons?

A. I don't know how far exactly, to the measure, but I should judge it was about an inch.

By the Court:

182 Q. Wherein did you try to make your structure different from the one you saw at the Blackstone?

A. I endeavored to do away with the putlog or the angle irons and the use of bolts for connecting the putlog to the U-shaped
172 frame, and utilize the 2 x 10 feet putlogs or timbers that were around the building.

183 Q. When you were at the Blackstone and saw the structure you have testified about was identical with this Exhibit 15, did you at that time make up your mind to differentiate the structure in that particular?

A. No.

184 Q. When did that idea occur to you?

A. In the early part of June.

185 Q. How did it happen to occur?

A. Mr. Merrill called me up by phone and told me that he was ready for a scaffold, and wanted to know if I had any ready, and I told him no. He said he had to have it, and for me to get busy and design something he could use. I went home and made several designs, worked all one afternoon and evening, and finally arrived at putting the putlog in the U-shaped frame.

184 Q. You set about solving that particular problem how to differentiate that machine you would make from the Blackstone in that particular?

A. I set about to differentiate from the Blackstone machine.

185 Q. In what particular?

A. To make them cheaper, and make a machine that could be used without infringing the patent of the New York Scaffolding Company.

186 Q. This was some three months after you had been at the Blackstone?

A. Yes sir.

187 Q. In the meantime you had not devoted yourself to the matter at all?

A. No.

188 Q. And yet you recalled the details of the Blackstone construction sufficiently so as to endeavor to make a difference in the one case you mentioned?

A. I don't understand.

189 Q. Recalled the details of the construction of the Blackstone at that time, in June sufficiently to enable you to solve the problem of making it different in the particulars you have testified about?

A. Yes sir.

190 Q. You didn't as a matter of fact know at that time just how these logs were fastened to the bottom part?

191 A. I knew from observation, seeing the bolts pass the angle irons and bolt extend through.

192 Q. Why, at that time if you had never before seen a machine—had your attention directed particularly to that part of the Blackstone device?

A. Because I thought of using a winch and bolting the winch down to the putlog by four bolts and running the bolt through the putlog, and naturally was very much interested in the manner in which those were fastened, because of the safety of the scaffold.

193 Q. You did not find out then how they were fastened, you did not know whether these bolts did not pass through the metal part of the frame?

A. I didn't know. But any practical mechanic would know as well as he knew anything, that those bolts could not pass through an angle iron or a piece of iron that was only about three-eighths of an inch thick.

194 Q. It was thicker than that?

A. Not where the angle iron comes against it.

195 Q. Did you have that in mind when you went to the Blackstone?

A. No, I didn't have it in mind. I went up there to observe and study the machine closely.

196 Q. Do not you know—it is of some importance in this case to determine that very fact—don't you understand that the question of rigidity of adjustment is a matter of importance in this case?

A. I don't know that it is important.

197 Q. Well, it is. What I want to know is—I will say it seems improbable to me under the circumstances you have testified to, not knowing anything about these machines at all, never having seen any, you should have gone to the Blackstone and seen that appa-

ratus, had your attention directed particularly to that part of the machine, and then not for three months have paid any attention to it, and set about immediately to differentiate your machine from the Blackstone machine with respect to the manner the putlogs were fastened. I want you to give us all the information you can on that. The question of the probabilities of the thing having happened in that way.

A. Well, it is not a probability, it is an actual fact, the way that happened.

197 Q. That is to say, you can add nothing to the testimony you have given with respect to the manner in which it happened.

174 I understand you say that at the time you conceived the idea and set about making drawings at your home, you had not in the interim made another examination of an apparatus of this kind?

A. Before I made the drawings I didn't examine apparatus of that kind. I went down to Carpenter and examined different sketches of hoisting apparatus.

198 Q. Had you seen any patents relating to this machine the Murray patent?

A. Yes, I had seen a number of patents.

199 Q. Which ones had you seen?

A. I presume I saw them all, Mr. Merrill at the time he called me down and I had the conference with him, he gave me a book containing, I should judge about 50 patents on scaffolding, and it was investigations he had made by Parker & Carter of Chicago, and I looked over the drawings of these different patents, the manner in which the scaffolding is done, scaffolds and every manner of hoisting structures. That was after I was at the Blackstone hotel, that was in June.

By Mr. Goepel.

Mr. Lane: If there is any question about the situation at the Blackstone, I would like to supplement it with additional testimony.

200 X Q. You conceived that invention in May, 1909, did you not?

A. Somewhere around that neighborhood.

201 X Q. When was it, May or June, 1909?

(No answer.)

202 X Q. To day you testified June, 1909.

A. No, it was in May. The patent was issued in June, 1910.

203 X Q. Then you correct your testimony that you gave today, and your conception was in May, 1909?

A. If I said June I had in mind the issuance of the patent.

By the Court: The testimony was it was conceived about ten days *about ten days* prior to the date of the application.

Witness: That is the date I did conceive it. When was the date of that application?

By the Court: June 19th, 1909.

A. Then it was in June that I—it was about, I should say between

the 10th and 15th of June I made the drawing. In fact I could, if I had more time—I didn't know that they wanted me to come up here until yesterday afternoon, and I went home and tried to find the file that contains this drawing with the date on it at the time I made it.

204 X Q. What is your independent recollection as to the date when you conceived it—was it ten days before you filed, or not?

A. That didn't exceed ten days.

205 X Q. You are sure of that?

A. Yes, pretty sure.

206 X Q. How is it that you testified in the case of the New York Scaffolding Company vs. Liebel Binney, in October, 1915, that it was May, 1909?

A. I don't know that I testified that. It was a misunderstanding on my part if I did.

207 X Q. Do you deny that you so testified?

A. No, I don't deny, I don't know, I don't recollect.

208 X Q. You have no recollection whatever that you testified it was in May, 1909? Is that right?

A. I have no recollection of testifying it was May, 1909.

209 X Q. I read from a deposition taken in the case of New York Scaffolding Company against Liebel-Binney Construction Company, pending in the *United States* District Court of the United States for the Western District of Pennsylvania—

Mr. Lane: Was that deposition used in that case?

Mr. Goepel: It was the witness' affidavit under oath.

By the Court: Proceed.

Defendant excepts.

"In the month of May, 1909, I designed the suspended scaffold and applied for a patent on the design, and organized the Henderson Scaffolding Hoist Company in conjunction with Oscar J. Junge, and for a period of two years conducted a scaffolding business, during which time we scaffolded a large number of buildings in Chicago, Cleveland, Minneapolis, Des Moines, Iowa, and other cities in the United States." That statement was taken down stenographically at the offices of Parkinson & Lane. Do you deny that?

A. No, that was my best recollection at that time, that it was in May.

210 X Q. Have you done anything since that time, by means of any memorandum, looking at any memorandum, to refresh your recollection as to the date of your conception?

A. Yes, I looked over a number of papers in this file which contains the agreements relative to the business of the Henderson Scaffolding Hoist Company, and also looked at the drawings which I made at the time.

211 X Q. Now, at the time you sold out, or the Henderson Scaffolding Hoist Company sold out its interest, were there on the market in Chicago at that time the same machines that you saw at the Blackstone Hotel?

A. I don't think the machines I saw at the Blackstone hotel were on the market, if you mean for sale.

212 X Q. The question is, were they in use—I mean used on the market?

A. Yes.

213 X Q. Those machines at that time had a rigid lever pivoted on the rod bearing the drum, with the bottom of the U-frame being attached to the supported members of the scaffold by means of bolts. Is that right?

A. Yes.

214 X Q. Did you testify at one time that you never saw any machines like those shown in the Henderson patent No. 959,008 in use, which were leased by the New York Scaffolding Company?

A. I never saw any that I know were leased.

215 X Q. Do you deny what I just stated is the fact, that you did so testify?

A. I don't get your question exactly.

By the Court: Put the question in the proper form, calling his attention to the time, place and circumstances.

216 X Q. In your deposition taken in Chicago October 15th, at the office of Parkinson & Lane, in a case pending in the United States District Court for the Western District of Pennsylvania, entitled, New York Scaffolding Company vs. Liebel-Binney Construction Company, you testified as follows: "I have never seen any machines like these shown in the patent, in use, which were leased by the New York Scaffolding Company"; and the patent in that answer refers to the patent No. 959,008. Do you deny you testified to that effect?

A. I do not deny I testified to that effect. I did testify to that effect.

217 X Q. You were shown the page of Defendants' Exhibit 2, more particularly page 11. How can you tell that is a U-shaped frame at the bottom?

A. Well, there is no visible means of support other than a U-shape and so the bolts go through, naturally the conclusion Nobody can tell by simply looking whether it is a U-shaped frame or not.

218 X Q. Where do you see any bolts?

A. There are a couple of bolts, it looks like bolts, extending through there.

219 X Q. Are not those two pair of white dots?

A. It looks like bolts.

220 X Q. The picture only shows two pair of white dots?

A. It may be.

221 X Q. There is nothing there to indicate a bolt or bolt head or bolt nut, is there excepting those four white dots?

A. Only those, whatever it might be.

222 X Q. Where do you see the bottom of the frame?

A. I don't see the bottom of the frame.

223 X Q. For all you know there might be a web in there—is that right?

A. Yes. It would be the first web I ever heard of in that kind piece of iron, from my experience in forging and steel business.

224 X Q. Notwithstanding the fact you see what is in that picture, page 11, you come here to-day and say that structure you saw in the Hotel Blackstone was exactly like that to all appearances?

A. Yes sir.

225 X Q. Turn to page 13, and I ask you how you can say that it is a U-shaped frame, from the picture?

A. You can't say it has that from the picture, but all the scaffolds, whether one or two exceptions only, the machines with this type of bracket and type of machine, every one I ever saw had a U-shaped frame.

226 X Q. Is it for that reason you say the structure at the Hotel Blackstone was like that?

A. The structure is like that from the appearance of the picture from the angle of observation.

227 X Q. I show you Defendant's Exhibit No. 1, and ask you how you can say by turning to any of those three pictures, how they are constructed in that respect?

A. You can't see from the picture the identical structure.

228 X Q. And I show you Defendants' Exhibit No. 4, in which you found in the center portion thereof when it is opened up three cuts that are the same views you just examined in these two last exhibits. How can you tell from either of those cuts how the connection is made? And I will mark those for the purpose of keeping the record clear, in lead pencil H 1, H 2, H 3.

A. Well, by observing H 3 with the angle iron alongside of the machine with a hole through and the planking laid over, must be to represent the drawing H 3—or the use of the machine in H 3, naturally any mechanic, or any one who has any knowledge of mechanics—or anything else—would naturally conclude that they were fastened in that manner. If they were not there would be a dotted line shown in mechanical drawings usually, showing the way the machine ran.

229 X Q. These same views which are marked H 1, H 2, and H 3, you saw before to-day, did you not? At the time you gave your deposition October 1915?

A. Yes, I saw them.

230 X Q. And formed the same conclusions in your mind when you looked at these pictures that you form to-day? Is that right?

A. No, I knew they were fastened that way, there was not any conclusion formed at that time. It was a fact. It is the natural and usual way of fastening, as well as I know anything by observation and experience.

231 X Q. How high did that man on that scaffold at the Hotel Blackstone, pump those machines—that is, pump the one putlog or the adjacent one, when he pumped both at the same time?

A. They pumped them, I should judge raised it about six inches. (He scaffold.)

232 X Q. How many times did you see that he pumped six inches?

A. On each of the three machines. He pumped up a little bit at a time.

233 X Q. You are positive it was not more.

A. I didn't measure it. It was my observation. I was not waiting him particularly pump up the scaffolding.

234 X Q. How much of a load was on that putlog at the time you state he pumped as much as he did?

A. They were not working on that end of the scaffold. It was entirely empty.

235 X Q. You were the only man in that immediate neighborhood except the man that did the pumping?

A. Yes.

179 236 X Q. So that the weight that was on the platform was just the weight of two men?

A. No, the weight of the man himself.

237 X Q. And you stood away?

A. I was standing there.

238 X Q. How long was that putlog?

A. I should judge the putlog was about—I think there were five planks laid there. The putlog must have been about between 50 and 60 inches long I should think, between four and five feet, I could not say exactly, I did not measure.

239 X Q. The handle of the machines extended toward the inner portion of the platform.

A. They did not.

240 X Q. Which way?

A. They extended along parallel with the platform.

241 X Q. He could reach both of them.

A. Could reach both of them.

242 X Q. So he did the pumping and spread his arms the length of the putlog and pumped at the same time—is that right?

A. He held one, and then pumped on the other.

243 X Q. Didn't you testify before he pumped both at the same time?

A. Not identically at the same time. I did not testify he pumped both at once.

244 X Q. What do you testify now?

A. He pumped one and then pumped the other.

245 X Q. He pumped at one end of the putlog and finished his pumping, and then walked over to the other end?

A. No, the handles extended inward and he pumped one and then the other.

By the Court:

246 — Q. Had hold of both handles at the same time?

A. Yes sir. He didn't shove down on both at the same time, he held one, and put his weight over on one, and then put his weight over on the other.

247 X Q. He had those machines.

A. Yes sir.

248 X Q. And he had handles extending in the direction of the length of the platform—is that right?

A. Yes sir.

249 X Q. And then he had one hand on one handle to pump it, and the other hand on the other handle to pump that?

A. Yes.

250 X Q. He held both handles?

A. Yes.

251 X Q. Then first gave one pump on one machine and then the other pump on the other machine? That is entirely right?

A. Yes sir.

252 X Q. And the total amount of pumping or raising he did was about six inches?

A. About six inches.

253 X Q. And that he did for the three pair of machines?

A. Yes sir.

254 X Q. I show you page 13 of Defendant's Exhibit 2, and ask you to explain how it is possible to do the pumping you describe when the machines are arranged as in that picture, when the handles extend in opposite directions on the length of the platform?

A. Well, the machines are not arranged in that way on the Blackstone. The handles extended inwardly.

255 X Q. What do you mean by inwardly?

A. The handles extended along on each side like these here. Both extended in this direction, the same as shown in this photograph here. (Pointing to page 11 of Defendants' Exhibit 2.) The handles were both on the inside as shown there, and both of them extended in the same direction.

256 X Q. Were the handles just like they were on page 11?

A. Yes.

257 X Q. Didn't those handles on that platform in the Hotel Blackstone have a sleeve that went over them so as to enlarge their length—get a larger leverage?

A. No, they put a pipe on.

258 X Q. They had a pipe at that time?

A. Yes sir.

259 X Q. Did they have two pipes—one on each handle?

A. Yes.

260 X Q. How long was that pipe?

A. Four or five foot long, I should think.

261 X Q. They had one of those pipes on each of those handles?

A. Yes sir.

262 X Q. That was at the Hotel Blackstone?

A. Yes sir.

263 X Q. How is it possible that the ends of those handles could be reached by the hands of the pumper, when the pipes are four or five foot long?

A. Why not?

264 X Q. He took those pipes off and put them on the handles of the next pair?

A. Yes sir.

265 X Q. Did you ever see that done at any other time?

A. Yes sir.

266 X Q. Where?

A. On various jobs.

267 X Q. Where?

A. On the Republic Building in Chicago.

268 X Q. What year?

A. Shortly after, I should say about a month.

269 X Q. You have it down to May?

A. I could not state exactly, somewhere around that, June or July. I don't remember exactly what date it was. I know I went up to the Republic Building and looked over the operation of the scaffolding there.

270 X Q. Was that before or after you conceived your invention in the patent in suit?

A. I could not say exactly whether before or after.

271 X Q. Didn't you testify before that the only form you saw was on the Blackstone Hotel until you conceived?

A. That is my recollection, yes sir.

272 X Q. There were planks on the platform when you saw it pumped two at a time?

A. Yes.

273 X Q. And also at the Republic?

A. I didn't see it at the Republic.

274 X Q. Where did you see it pumped like that at any other place than the Blackstone, where the man had these four or five feet pipes?

A. He had the pipe there and the man was around the scaffold. I didn't see him do any actual pumping.

275 X Q. With two pipes.

A. Just had one.

276 X Q. Where did you ever see with two pipes?

A. I could not say the exact place, I would not state absolutely where I seen two pipes used other than that, because it is a common method of hoisting a scaffold of that type.

277 X Q. As a matter of fact, did you see two pipes pumped
182 and used at the same time, other than on the Blackstone Hotel
as you have testified?

A. On a brewery job on 18th—in Chicago, I could not tell the exact location.

278 X Q. What date?

A. A year or so after.

Q. That man had two pipes and pumped at the same time?

A. Yes sir.

279 X Q. Any other job?

A. I can't remember any other job.

280 Q. If it was so common, why can't you remember some other job?

A. I could probably remember a dozen jobs. In fact it is a common occurrence.

281 X Q. What were the loads on the platform when you saw

these other jobs where the man pumped with 4 foot pipes, two at a time?

A. No load.

282 X Q. In each case where you saw that pumping, there was no load?

A. There was no load.

283 X Q. As a matter of fact was not it common practice at the time you were scaffolding, to have only one of those pipes and one machine pumped at one time? And one machine pumped at one time?

A. Where there was a load on the scaffold, yes.

(Short recess.)

284 X Q. You have taken out other patents which were applied for about the time you applied for the patent in suit?

A. No, the other patents were applied for subsequently.

285 X Q. And you took out about three or four patents?

A. Applied for about three or four patents.

286 X Q. On scaffolding devices?

A. Yes.

287 X Q. When did you ever tell the attorneys of record in this case, Mr. Lane and Mr. Mankle of the facts that you have testified about to-day, about the Hotel Blackstone?

A. I told them yesterday.

288 X Q. For the first time?

A. Yes sir.

289 X Q. Did you tell them some time about September or October 1915?

A. Not to my recollection.

290 X Q. Did you ever see a structure like the photograph I hand you?

A. No, I never saw that structure.

291 X Q. I call your particular attention to the small pieces of angle iron which bind the frame of the drum and the angle iron below, and ask you if you have ever seen anything like that before?

Objected to as not proper cross-examination. Overruled. Defendant excepts.

A. I have never seen anything like the details to which you call my attention.

(Photograph marked for identification No. 25.)

292 X Q. You knew at the time you gave your deposition in September 1915, that this same patent in suit was in issue at that time, didn't you?

A. Which patent do you mean?

293 X Q. The patent in suit, 959,008, here in issue, you knew was in issue in that suit, didn't you?

A. Yes sir.

294 X Q. And you also knew that information you gave today to

the court, and yesterday to Mr. Lane and Mr. Mankle, might have bearing upon the validity or scope of your patent in the other case in which you deposed in September 1915?

A. No, I didn't know, because I was not asked about it.

295 X Q. You were very much aggrieved about 1910, 1911, as to the result of any negotiations you made with the Henderson Scaffold Hoist Company on the one hand, and the New York Scaffolding Company on the other?

A. Well, I didn't feel very good, they forced me out of business.

296 X Q. And since that time you feel very keenly——

A. No sir, it is all over now and gone. I don't feel biased, it is no use.

297 X Q. At that time you expected \$6,500.00 a year, didn't you?

A. No, I didn't expect anything.

298 X Q. Do you mean to say you didn't ask for it?

A. Ask from whom?

299 X Q. From any of the officers of the New York Scaffolding Company.

A. No, I never asked for \$6,500.00 a year. We never got that far in the negotiations, as to what salary I or Mr. Junge should receive.

184 300 X Q. You are not in the scaffolding business now, are you?

A. I am not. According to agreement that I signed I agreed not to go into the scaffolding business within the United States, at the time I transferred my stock.

301 X Q. The fact that you so signed that agreement and you saw the great success of this patent, makes you pretty sore?

A. No, I could go into the scaffold business tomorrow if I wanted to; that agreement would not keep me.

Redirect examination.

By Mr. Lane:

302 R. D. Q. The court asked you one question that I think very pertinent here. How was it you happened to examine so very closely the structure at the Blackstone Hotel which you examined in February 1909. Bring out anything you can in that connection.

A. Mr. Merrill asked me to design a scaffold, and I went there to study the scaffold and observe the manner of operation and erection, and to learn of its construction.

303 R. D. Q. How did Mr. Merrill happen to send you there?

A. He told me that the scaffold, one of the scaffolds similar to what he wanted to use was in operation and use on the Blackstone Hotel, and said I could go down there and look it over, and so I went down there and looked it over very carefully.

304 R. D. Q. At that time had he asked you if you could not get some way of getting a scaffolding that was satisfactory without using the principles of the one there, or using the same device at there?

A. Yes, he asked me to design a scaffold that could be used with-

out infringing, or make him liable to the New York Scaffolding Company.

305 R. D. Q. He called your attention specially to the fact that the New York Scaffolding Company had such a device used on the Blackstone Hotel?

A. Yes sir.

Objected to as hearsay. Overruled. Plaintiff excepts.

306 R. D. Q. Did he state he had had any negotiations with the New York Scaffolding Company relative to the use of this device on the buildings that he was constructing in Chicago?

Objected to. Sustained. Defendant excepts.

185 307 R. D. Q. Why was it that Mr. Merrill selected you to go over and do that work, if you know?

By the Court: He testified to that. On account of his experience and training.

308 R. D. Q. When you said in answer to the question of counsel that you spoke to Mr. Lane and Mr. Mankle about the matter, you did not see me until this morning?

A. No, I didn't see you until this morning. I saw Mr. Mankle yesterday afternoon.

309 R. D. Q. How wide were the arms of that that raised the windlass, apart, in these scaffolds. I believe you said the total width was 50 or 60 inches. How far apart were these arms that the gas pipes were hitched to?

A. About 30 inches.

310 R. D. Q. So that a man had no difficulty in reaching one and the other in pumping them up?

A. No.

311 R. D. Q. It was perfectly easy for you to see the bottom of the strap iron, cross-bar, that formed the bottom of the U-shaped frames at that Blackstone Building, was it?

Objected to as grossly leading.

312 R. D. Q. Did you as a matter of fact see the bottom of the cross-bar member at that time?

A. I did.

313 R. D. Q. How did the bottom piece of this U-shaped frame compare with the side pieces as to width, that is, how did the upright bottom bars compare in width?

A. The same width.

By the Court:

314 Q. After Mr. Merrill had given you the instructions which you say he gave you to get up some apparatus that would not make you liable as infringer, just wherein did you make the difference from the one you saw there?

A. The difference was in the manner of operating the drum and placing of the machine. I placed the machine broadside to the building and inserted the putlog in U-shaped frame so it is easily adjustable, and I used the gear instead of lever. I used a gear and used drum, and as long as drums were in operation, I thought by placing the frame in that way and inserting the putlog and using different hoisting mechanism, there would not be any trouble.

316 A. Wherein does Exhibit 15 differ from that?

186 A. In 15, the lever and ratchet comes in the teeth on the part of the drum, by pressing it down you hoist it up.

317 Q. Wherein does it differ from the one you devised with respect to the U-frame and placing the putlog?

A. The U frames I made were longer, and the putlog was placed in between the upright bars of the U-frame instead of alongside—being bolted alongside.

318 Q. Is 15 capable of being used in the manner your structure is used, by putting the putlog in the U-shaped frame?

A. Yes sir, I think it could be. But my machine did away with the extra element of the angle iron and bolt.

319 Q. In your machine you lay a special stress upon the elements of the U-shaped frame, don't you?

A. Yes sir, the application of the U-shape, to put that down underneath the putlog.

Q. The U-shaped frame was an element you laid some stress upon in your patent?

A. Yes sir.

320 Q. Do you mean to say so far as that is concerned, you were not attempting to differentiate that from anything else you had seen?

A. Differentiate it?

321 A. Did you copy that from the Blackstone machine, or think of that as something new?

A. It was practically the same thing, it was the same thing as the Blackstone machine.

322 Q. That element of your claim 3, although you laid some stress upon it, you say now you copied it from the Blackstone apparatus?

A. It might be said to be copied. It is a combination of the elements.

323 Q. Did you later on understand that in order to get your patent allowed at all, considerable stress had to be laid upon that very feature, in the Patent Office?

A. That is what Mr. Merrill said, and Brown and Williams drew the claims and prosecuted them along that line.

324 Q. You never took the position you were copying that feature in your apparatus from the one you had seen at the Blackstone?

A. Well, it is the same thing as the Blackstone.

325 Q. In your patent did you lay any particular stress for the mechanisms for hoisting and for taking up the cables?

187 By Mr. Lane: What happened, as I understand that file wrapper, is this: he put in a large number of claims, went over to see his attorney, and they wrote up these claims. The Patent

Office came back and rejected them, and this Murray patent was amongst them. Then they amended.

326 R. D. Q. What is this device that is here before you?

A. That is a machine similar to those we manufactured and sold to George Griffiths.

327 R. D. Q. By you, or the Henderson Scaffold Hoist Company?

A. By the Henderson Scaffold Hoist Company.

328 R. D. Q. And that is the one machine that was made by you after you applied for your patent?

A. Yes sir.

329 R. D. Q. And this was one of the devices you turned over similar to the one you sold after the patent was applied for?

A. Yes sir.

330 R. D. Q. And this is the type of device you designed for Merrill?

A. That was not the exact type I designed for Merrill. The one I designed for Merrill, this bolt was lower down and extended through the frame, and a small gear wheel set in here and operated, I think, with a crank at the side.

331 R. D. Q. There are some holes in the bottom of that frame. What are they put there for?

A. They were put in subsequently to drive a ten-penny spike into the putlog to keep it from slipping out of the stirrup.

332 R. D. Q. What did you put that in for?

A. As a matter of precaution, after I had seen the machines on the city hall and several other jobs, the men were careless in hoisting up one putlog higher than the other, it occurred to me that without any fastening the putlog was liable to slip off and let the scaffold down.

333 R. D. Q. How long was that after you made your application for patent?

A. I should say along—let me see—about six or eight months after.

334 R. D. Q. And these were the machines that the New York Scaffolding Company wanted you to discard?

A. Yes, those, and the ones similar to the ones I made for Mr. Merrill.

188 By Mr. Lane: We offer in evidence the Exhibit just referred to by the witness as Defendants' Exhibit No. 15.

335 R. D. Q. Did you make any of the devices shown in figures 3 and 4 (4) with the windlass at right angles to the building, and where you used only one at each end?

A. I made four machines and twisted the angle irons and brought together at the bottom and twisted it in order to use the narrower putlog, so as to put the machines along the scaffold, place them along but they didn't hang. I took them over on the Sherman House and they put them up, they didn't hang properly, so I never made any more.

Recross examination.

By Mr. Goepel:

336 R. X Q. What time of day was it when you were at the Hotel Blackstone and looked at those machines, do you say?

A. About 11 o'clock in the morning.

337 R. X Q. Was it raining, or sunshine?

A. It was a clear day.

338 R. X Q. On what part of the building were you—what exposure?

A. On the north exposure.

Redirect examination:

339 R. D. Q. You spoke about seeing these machines being operated, and lifting one side and then the other, and there was some danger. What did you mean by that?

Objected to as putting the words in the witness' mouth.
Overruled. Plaintiff excepts.

A. What machines?

340 R. D. Q. The machines you first put out and Mr. Merrill used on the Chicago court house?

A. I mean that the men that hoisted the machine up so that one plank extending from one section to the other would be at an angle and slip down and outward or inward, and hoist one machine and then the other, and if he hoisted the platform I was afraid the putlog would fly, and for that reason I put holes in the side and instructed the contractor to drive a spike in there part way and pull it out—

189 341 R. D. Q. Like a man's feet slipping out of the stirrup on horse back.

(No answer.)

Recross examination.

By Mr. Goepel:

342 R. X Q. How far did you lift one end of the putlog before it would take place?

A. I don't know how far you would have to lift it before it would take place; but on the city hall on one scaffold there was one putlog that was about 2 feet to 3 feet higher than the other.

343 R. X Q. That was possible with your frames, was it not, to raise it two feet?

A. To make a raise of 2 feet, it was not practicable.

344 R. X Q. It was possible?

A. Yes sir.

345 R. X Q. Even then they would not slip out?

A. None of them ever did slip out.

Redirect examination.

By Mr. Lane:

346 *Court*: But the reason you put in the ten penny nails was for fear they would.

A. I thought it would prevent the putlog from beginning to fly as long as the machines were horizontal, or not at any great angle, the weight of metal would keep the putlog from slipping up.

347 Q. Then you subsequently got back to the very thing you tried to get away from on the Blackstone?

A. That was a permanent thing there. It simply drove in half way, you could reach over and take a hammer and draw it out and take the machine apart, it is really a temporary thing.

By Mr. Lane: There is one thing, we could save considerable time if you are willing to stipulate. Are you willing to stipulate that the deposition of Mr. Pittou, connected with the Patent Scaffolding Company, and Cavanagh, a brother of the witness Cavanagh who testified here, and was scaffolding the buildings for the New York Scaffolding Company, which was given in the case of the New York Scaffolding Company against Liebel-Binney Construction Company, may be received in evidence here without
190 the necessity of putting on any witnesses to prove the facts established by them.

By Mr. Blum: Cavanagh is dead, and this action is not between the same parties. We do not consider anything binding or anything that should enter into this case at all. This case must stand upon its own record.

Adjourned until 10:30, June 1, 1916.

June 1st, 1916—10:30 a. m.

Same Counsel present.

The trial proceeded as follows:

Testimony of Alfred E. Davidson.

The witness ALFRED E. DAVIDSON recalled by defendant, testified:

Examined by Mr. Lane:

259 Q. Have you been able to refresh your recollection as to the question I asked you about yesterday?

A. What was that question?

260 Q. As to when the New York Scaffolding Company, or Patent Scaffolding Company commenced putting out the scaffold hoisting devices substantially like Plaintiff's Exhibit 15?

A. I have tried, and I have to some extent.

261 Q. Can you give it positively now?

A. I believe I can give a positive answer, but not an exact date.

262 Q. See if I can refresh your recollection on it.

By the Court: It don't need refreshing. He can answer the question.

By the Court:

263 Q. Give the date when they started to put out devices approximately like Exhibit 15.

264 Q. The earliest date.

A. Early in 1910.

265 Q. How do you fix that date?

A. I would have to go back and lead up, if I could be allowed to refer to some dates I took from copies of patents that were shown me yesterday, Mr. Goepel allowed me to have last night.

266 Q. Do anything you can to bring out the date.

A. May I look at the starting date?

By the Court: Yes.

A. Well, May 1907, Murray patented a platform machine, and in March 1908 a overhead machine, according to these papers; then in May 1908, we formed the New York Scaffolding Company to handle these Murray devices. Now later than this machine was an overhead which we took over from Murray—

267 Q. When was that taken over?

A. That was taken over when we formed the company.

268 Q. In 1908?

A. Yes, and we operated, or tried to operate that, but immediately the new company was in difficulties because the Cavanagh people had been operating with an overhead machine, and they really had the business, and what we took over—well we was stuck, apparently.

269 Q. Stock in what way?

A. Our machines did not operate as we hoped they would.

270 Q. Which ones do you mean now?

A. I mean the Murray.

271 Q. Overhead?

A. Murray overhead we did some business with. The Murray riveted rigid machine it was very hard to put on the market.

272 Q. I don't just get what you mean. What do you mean by the Murray riveted machine?

A. That is the Murray patents of 1907 machine which we took over and which we expected was going to be a better machine than—would compete with the overhead, but in that we were disappointed, because it was practically junk, and of course we were experimenting, and our people in the shop were working continually on these machines and operating what would operate, and that was the overhead machine. Cavanagh threatened us with suits and we was in trouble and about to lose everything we put into the business.

273 Q. What was involved in that suit?

A. Just coming after us for having any kind of a machine at all. I think, as I remember. In December 1908 we was about the end of our resources, and I went to Mr. Cavanagh, or his representative,

and bought out his business and his overhead machines, paying him in cash \$23,000, keeping back \$2000 until we could get his plant gathered in, which took several months because they were out on contract. Now we started with that plant, it was known and satisfactory had the name, to get our money back, and we was busy with the Cavanagh overhead machines right along during that summer. In the early fall, it might have been in October, I came to Chicago—

272 Q. What year?

A. 1909. We had a representative there, he told us there was a new machine on the market and was getting the business away from us.

275 Q. At the time you say, was not the New York Scaffolding Company, whichever it may be, selling these platform machines in Chicago?

A. They were hiring, or trying to hire a machine, either overhead, I would think—

276 Q. Just state what you know, not what you think.

A. Well, I don't know exactly about that.

277 Q. Do you know what he referred to in saying they were getting the business from you—what business?

A. Well, we was not getting any business, we was looking for it, apparently was not getting it, and he reported there was a new machine on the market that was taking it. So I went up to look over the scaffolding situation, and found there was a new machine.

278 Q. What was that machine?

A. That machine was put on the market by Henderson; but a friend of mine doing the city hall, and the Singer Building in New York, told me of the Henderson device, that he would be a good man to connect up with to handle our business, handle the scaffolding business in Chicago and he gave me his address; told me that he would see Henderson and advise Henderson we were good people to deal with. I went to Henderson's house, talked over the matter, offered him a position as manager, and tried to make an arrangement with him to take over his plant. He had an entirely different machine from what we had been trying to operate. We make our scaffolds very narrow, his you could turn it any way, make the scaffold any way, scaffold any exterior, strengthen up any part of your scaffold with an extra frame and drum, which we could not do.

279 Q. When you speak of what you could not do, what was the machine you are speaking about?

A. We could not do that with any machine we had.

280 Q. What machine bothered you—gave you that trouble?

A. Why, we had a rigid frame originally we had a overhead and they both gave us that trouble.

193 281 Q. Describe what you call a rigid frame machine that was giving you the trouble.

A. I think I stated yesterday describing machines was entirely out of my line.

282 Q. So you don't know just how the machine was made?

A. No. I paid little attention to that part of it. I knew what the machines would do.

283 Q. The machines you had then were machines that stood at right angles to the building, as distinguished from broadside to the building?

A. That was the way of the Murray patent.

284 Q. And the Murray machines used by you at that time, prior to 1909?

A. We was using the machine of the rigid type, like that patent.

285 Q. Can you state what you mean by rigid machine?

A. I have an understanding the court does understand.

By the Court: I understood Mr. Davidson to explain it the other day as a matter of rigid bolting.

286 Q. Of those old machines, was not there a U-shaped frame?

A. I think not. But I am not going to go into the construction of the machine.

By Mr. Lane: I don't think there has been anything to show what was done prior to this time. I would like to find out.

By the Court: I think Mr. Davidson endeavored to explain the other day when he had the sketches before him.

A. It was rigidly bolted.

287 Q. How was it rigidly bolted? That is what I am trying to find out if I can.

A. There is two pieces come down, as I understand it roughly, and this piece goes right across, forms a putlog and is rigidly bolted to those two frames. That is, roughly, the way I understand it.

288 Q. Instead of being made in one piece, it had two sides and a piece across bolted to it at the bottom?

A. It had a piece across bolted to it at the bottom.

289 Q. Go ahead.

A. Mr. Henderson thought he had a fortune and he would not listen to my proposition of making him manager and trying to extend our business. This was reported back, and immediately the people that do know machines, our engineers, got to work, 194 and early in 1910 we commenced to put out machines, during the beginning, and worked through 1910——

290 Q. That is, like Exhibit 15?

A. Why, as I understand that, our energies were turned to the platform machine away from the overhead machine and have been that way yet. We were successful, the machine worked out, because in 1910 we was awarded the very coveted medal.

291 Q. On plaintiff's exhibit 15?

A. On what we had shown in the Museum, we had what we call Gold Medal Scaffold, or our improved type, we had a good many names now, the name we are trying to give it is Gold Medal Scaffold Platform type, flexible, able to do anything that we should wish to do with the machine. Those are the events, going over the business end of it as near as I can, as I have refreshed my memory.

292 Q. That was prior to the time the New York Scaffolding Company got any rights under the Henderson patent in any way?

A. Well, I can't state positively.

By the Court:

293 Q. Give us the date when you met Henderson the first time.

A. Well, just the date I could not fix, I think it was early in 1909, and perhaps in October.

294 Q. At the time you saw Henderson's machine and could not make any arrangement with him?

A. I could not make any arrangement with him.

295 Q. Then you went back to New York and your engineer devised this machine here, after seeing his—I mean, devised the machine like Plaintiff's Exhibit No. 15, and went ahead, put them on the market and got a gold medal on it without having any rights under the Henderson patent? Is that a fact?

A. Our patent attorney was advised of these matters, and he advised that we go back and purchase the rights, and we did purchase those rights, but not from Henderson, from his partner.

296 Q. The point I am getting at, you made these changes in the machine before you purchased any right, had any reason to believe you could purchase them?

A. I don't know.

297 Q. In order to refresh your recollection a little further, in the case of the New York Scaffolding Company against Whitney, the record in the court of appeals shows you said, after describing this Murray overhead type of machine: "Then came the Murray platform style of scaffold. This was similar in many respects to the Murray overhead type, but the hoisting mechanisms were placed on the scaffold and made fast and secured there so that they could be operated by a workman on the scaffold. This type met with success. It is very accurately depicted in plaintiff's Exhibit No. 12 C. W. P." That is a fact is not it?

A. That would be—at what date was that?

298 Q. When you gave your deposition in the Whitney case.

A. I mean, what date was I talking about?

299 Q. Immediately after the manufacture of the Murray overhead type of machine, you said the next one that came along was the Murray platform type.

By Mr. Blum: We have the exact stenographic report of the testimony, and I know many of these points were not considered of sufficient importance to go to the court of appeals. All we ask is he give the exact language from the stenographic transcript that no error can possibly arise.

Court: The witness has a right to be confronted with his own language.

300 Q. Is it a fact that this was the device shown in this circular which was presented to the court of appeals in the case there, correctly shows the Murray type of machine which immediately fol-

lowed in the business of the New York Scaffolding Company, the Murray type overhead machine?

By Mr. Blum: We have an exact duplicate of that already in evidence, and I object to referring to the Omaha record, bringing it here in any way.

By the Court: He may answer.

Plaintiff Exc.

A. What was the question, again?

(Question 300 read.)

A. That is the rigidly bolted machine that we was trying to work with.

By Mr. Lane: Have you a duplicate of it?

By Mr. Blum: It is in evidence already. It is the whole thing.

By the Court: Exhibit 4.

301 Q. And are the cuts shown in this circular which I have just handed you, the duplicate of the cuts shown in that, and marked H 1, H 2, H 3 of defendants' exhibit 4.

196 Mr. Lane: I withdraw the question and offer in evidence the circular which I have just called the witness's attention to, as Defendants' Exhibit 16.

Objected to.

Received. Exception by plaintiff.

302 Q. And the device shown in that circular was the one which you referred to in that case when you said the plaintiff used the Murray machines until Elias H. Henderson, whose patent was in issue, produced the devices set forth in said patent in issue.

Objected to.

By Mr. Blum: I would like to ask him to refer to one of the cuts and show it to the witness.

By Mr. Lane: There are only three cuts that I showed.

Witness: I can't answer from the picture.

303 Q. You said in your testimony "This type met with success. It is very accurately depicted in plaintiff's Exhibit No. 12 C. W. P." and that is the exhibit is it not?

A. You didn't read that to me before. I didn't know what you were driving at. I should say that is the rigidly bolted machine.

304 Q. That is the one that you speak of as having met with success, and as accurately depicted, is it?

A. I would not say.

305 Q. It is of that machine that I just called your attention to that you said: "The Murray hoist mechanisms had been secured in pairs to iron beams by riveting or bolting, and the scaffolds had been laid on those beams" is not is?

Mr. Blum: Is he trying to impeach his own witness, or trying to refresh his recollection?

By Mr. Lane: I am trying to refresh his recollection as to what was actually done at that time. If it is leading I will withdraw the question in that form.

Mr. Lane: Could I have the complete record showing the questions and just what he said.

Mr. Blum: We have it, but it has been marked up with all kinds of pencil marks, we would have to erase a good many things.

306 Q. In the case against Liebel-Binney Construction Company, brought by this plaintiff, did you testify as follows: "Then Murray came in the market with his platform machine, a machine operated from a platform, the fastening of the wire being supported the platform being from above, the wire being secured to the outriggers from the upper part of the building." Is that correct?

Same objection. Let him hand the witness the notes.

By the Court: I think it is not proper. He is your own witness.

By Mr. Blum: We do not want to be technical because he is a friend of ours in spite of his technical relationship. I am not admitting he is not answering the entire truth; but as a general proposition, ask the witness what he said, and ask him practically to repeat that testimony, would not be proper under the ordinary rule. Either he is Mr. Lane's witness or our witness.

Objection sustained. Defts. except.

307 Q. Will you examine page 55 of this record which I now hand you, and read into the record what it there says, and state whether or not that is a fact?

Objected to.

By the Court: There is no difference whether he reads it or you read it. I assume you cannot bring in the testimony given in another case, the testimony of your own witness in that way, Mr. Lane. Is there any reason why he should not be interrogated here as he was there? He has not stated he does not recall those facts.

308 Q. Will you please state what the facts are as to the Murray machine, as to the advantages of the Murray machine which was put on the market by the New York Scaffolding Company prior to their acquisition of any rights under the Henderson patent?

Objected to, the witness has not qualified as a mechanical expert.

By the Court: What is the purpose of that?

By Mr. Lane: I want to show the advantages are substantial, the same as in the Henderson patent.

By the Court: Go on.

Plaintiff excepts.

A. It is too technical for me, I can't answer.

309 Q. Did you or not testify as to the advantages of this Murray type in two preceding cases, in the 8th circuit and the Pittsburgh case?

A. I don't remember.

310 Q. Was or was not the Murray device, which was on the market prior to the acquisition of the Henderson patent by the plaintiff, a successful device?

Objected to, it was after the patent was issued.

Objection overruled. Plaintiff excepts.

198 By the Court: I think Mr. Blum's criticism was good, but may relate to a time intervening the application of Henderson and the acquisition of the patent. The answer to the question might relate to a time intervening the application of Henderson and the date of the issuance of the patent.

(Plaintiff excepts.)

A. I cannot answer that question.

311 Q. I hand you a certified copy of the bill of complaint of the New York Scaffolding Company against John Griffith and George W. Griffith, lately pending in Circuit Court of the United States, Northern District of Illinois, Eastern Division, and ask you if you recollect that suit having been brought by the plaintiff, and against what machine it was directed?

Objected to as irrelevant.

By the Court: What date is that?

By Mr. Lane: 1910. The allegations in the bill are to the effect the Henderson device is the same in substance as the Murray patented device.

Witness: I am not an officer of the company. That is all hearsay.

By Mr. Lane: I offer in evidence certified copy of the bill of complaint of the New York Scaffolding Company against John Griffith and George W. Griffiths, as Defendant's Exhibit 17.

Objected to as encumbering the record.

Mr. Goepel: It is a shifting patent.

Received. Plaintiff excepts.

By Mr. Lane: If you want to admit that the cut- shown marked H 1, H 2 and H 3 are the same cuts as shown in that exhibit in the case, I am willing to take that out.

Recross-examination.

By Mr. Goepel:

312 X Q. Did you personally obtain the money, the \$23,000 for Cavanagh?

A. I went out and hustled around and persuaded people that they should put some money in this thing, as I had——

By the Court: I do not see why there should be a reexamination on that. The witness stated that by way of explaining how he fixed a hole in a matter, the merits of the transaction he incidentally referred to.

313 Q. Did you criticise the machines that Henderson was putting out on the market? Did you criticise the machines in the present of Henderson in October 1909?

99 A. I don't recollect I did, I thought he was carrying too light a cable—a very obvious point or two.

314 X Q. What do you mean by a very obvious point or two?

A. Showing that I thought that the safety of the structure could be improved; otherwise it was perfectly plain to anybody what he could do with his machine.

(Short recess to enable Mr. Lane to confer with his next witness.)

Testimony of Louis C. La Belle.

LOUIS C. LA BELLE, called by defendant, being sworn, testified:

Examined by Mr. Lane:

1 Q. Please state your residence and occupation.

A. Chicago. I am a scaffold builder for George A. Fuller now Thompson Starrett Company.

2 Q. Will you please state what if anything you had to do with the work of building the Blackstone Hotel in Chicago.

A. Building up the scaffolds.

Objected to (by Mr. Blum). Public use not set up in the answer.

Ruling reserved.

3 Q. And when was that building constructed?

A. 1908.

4 Q. And when was your work finished there?

A. Fall of 1909.

5 Q. And what was your work during the year 1908 and 1909 at the Blackstone Hotel?

A. Well, in the first part of 1908 I done the excavation there, and coming on toward the middle of the summer done some of the scaffolding work in the court.

6 Q. Were you the superintendent?

A. No, I was foreman of the work.

7 Q. Will you please state what machines were used, if any, on the scaffolds of the Blackstone Hotel?

A. Well, the New York Scaffolding machine to the best of my knowledge, furnished by the New York Scaffolding Company.

8 Q. Will you please describe just how the scaffolds were arranged

and used by you on the Blackstone Hotel at that time, going into particulars as to the construction of the machines used.

200 A. We started out there was some work laid out where one 100 feet cables would reach. The machines came there and knocked down, had to put them together and hung them up there. The machines were set about 9 foot centers and set with 12 foot fences 2 x 10 x 12 foot long, and the machines we used was of U-frame with the angle iron put-log which was bolts run through and set on the bottom of the U-frame.

9 Q. Will you state how the putlogs were positioned relative to the wall of the building being constructed?

A. The inner edge of the putlog was towards the wall of the building, and there were two holes that fit in between that U, and there was 2 channels one on each side and bolted both right through that and set right down on the bottom of the U-shaped iron.

10 Q. What did you actually do yourself as to putting these machines together when they were put on the building?

A. I helped put them together, and have men go up on top of the roof, pull up the cables to fasten onto what we call the lookouts and see they were in good shape for the men to go to work.

11 Q. How were the parts of this mechanism assembled when received by you?

A. The two drums were separate and the putlogs, and then there was another piece they called for a guard, they used to call a pigtail—34 or 36 inches, about that.

12 Q. And how were the putlogs received?

A. They was two pieces of angle iron and they came separate, had to take them apart and run the bolts through them again and take them up at the place we wanted to put them.

13 Q. How were the frames attached to the putlogs—that is, the windless frames?

A. Well, the putlog they used to turn the frame up so to be right and left, an inner and outer one, and the putlog was two angle irons 1¾ to 2 inches, they were each side, on each side of the U-frame and bolts ran through, and when they stand up in place the bolts set on the bottom of that U-frame.

14 Q. Did it pass through the iron in any way?

A. No.

14 Q. Are there any machines in the court room here that correspond to the machines which you received in 1908?

A. I think there is, similar.

15 Q. What are those machines?

A. New York Scaffold machines.

201 16 Q. The machine you refer to is the machine Plaintiff's Exhibit 15, the one before you?

A. Yes sir.

17 Q. How if at all did the machines which you received in 1908 at the Blackstone Hotel differ from the ones you have just examined?

A. I don't see much difference in them.

18 Q. How did the frames?

A. About the same.

19 Q. About the same, were they the same or were not they?

A. Yes sir, the same.

20 Q. How about the windlasses, are they the same or different?

A. The same.

21 Q. How were these windlasses operated after they had been installed in the building?

A. Why, they always generally had a piece of pipe fitted out to fit on the handle, that would give a man more leverage to work.

22 Q. How were the frames positioned relative to the putlogs, at right angles, or in line with them?

A. The putlogs were set on both sides of that U-frame, one on each side, this way. (Illustrating.)

23 Q. And where did the bolts go?

A. Right in here. I don't see any putlogs here.

(Witness points to the upper side of the lower member of the U-iron.)

24 Q. Will you show the court just how these machines were placed relative to the wall of the building. Use that wall as the wall.

A. That would be outside of the machine, place that this way, and the other this way. The machine stood in this direction. That is the outside, that is the way; I call that the pigtail, then these channels were one on each side and bolts ran through. The bolts that ran through set right down here.

25 Q. What did you have to do to get the putlogs on the lower part of the U-bar?

A. There was two of them together, take the bolts out, set one on each side, and put them back again.

26 Q. Were there any bolts on the lower part of the U-frame on that construction?

A. No sir.

27 Q. Now, how was the platform raised by this mechanism? That is, did you raise both sides at the same time?

A. Sometimes, if there was not too much weight on it, one man should take one lever and work *done* one after the other. Our machines were set 30½ inches between, a man would have plenty of room when not much weight. If loaded too heavy, would have to have one man on each machine.

28 Q. When were these machines received by the Fuller Company?

A. It was during the summer of 1908, I don't recollect the exact date.

29 Q. When if at all prior to that time, had you used any such machines?

A. La Salle Hotel.

30 Q. Did you work on the La Salle Hotel too?

A. Yes sir.

31 Q. What did you do there, what machines did you use there?

A. Same kind.

32 Q. Were the putlogs and windlasses connected the same way?

A. Same way.

33 Q. And how were the cables supported which held the windlasses?

A. We made some—that is, at the La Salle Hotel they furnished some beams, and I believe they were 6 or 8 inch beams to fasten them, with a collar on the end of the cable, to fasten; but they had some trouble and done away with them beams, and we got wooden lookouts 3 x 12, leaving a space of about an inch, and put them on, and ran the cables thro' and put a bolt—there was an eye in the upper end—and put a bolt through and it would hang on them, and we had a bottom appliance we fastened the inside of them lookouts.

34 Q. Did you use the same method of raising and lowering the platform at the La Salle Hotel?

A. Yes sir.

35 Q. How much prior to the work of the Blackstone Hotel was that La Salle building work done?

A. In the fall before, 1907—during the year 1907.

36 Q. Do you know who sold those machines—how those machines were operated—on what plan those machines were operated?

A. I could not tell you.

37 Q. How were the planks placed on the putlogs?

203 A. By taking one plank through the inside of the U first, and we set the machine 30½ inches, used 3 x 10 inch plank and we knotted into the plank to fit around the bottom of the U, made it tight so any big pieces would not fall through.

38 Q. You could raise up one side of the platform first and then the other?

A. Yes sir, work the machine.

39 Q. How were the platforms positioned when in use? Were they practically parallel with the ground or did they tilt?

A. We generally tried to keep them as level as we could.

40 Q. When did you first know that you were wanted as a witness in this matter?

A. About nine o'clock last night.

41 Q. Have you any interest in this controversy one way or the other?

A. No sir.

42 Q. Do you remember whether there were any name-plates or patent marks on the structures used at the Blackstone Hotel?

A. There seemed to be a little copper plate on the side.

43 Q. Do you know what it said?

A. I don't remember. Something about patent applied for, or something of that kind. I don't remember the words.

44 Q. Will you see if there is any such similar plate on any of the machines in the room?

A. A plate something similar to that that is on there, (Referring to plaintiff's exhibit 15.)

45 Q. Are you familiar with the drawings in connection with your work at all?

A. I am.

46 Q. I hand you two cuts and ask you to state how those two cuts compare with the structure you saw, and the use of them at the Blackstone Hotel and La Salle Hotel in Chicago?

A. This one is something like this, with the exception of this here, we didn't use the outrigger, that is, the same outrigger, all we used, we ran a bolt through the eye in the cable, didn't use this piece at all—clamp, ran that cable right through that slot, 3 x 12 fitted together and ran a bolt through that eye on top. This is the eye at the upper end.

46 Q. How does the structure at the bottom—that is on the platform, compare with the structure used by you? Is it the same or different?

294 A. It is the same.

(Witness referred to Exhibits 13 and 14 of defendants.)

47 Q. Will you examine pages 11 and 13 of Defendant's Exhibit 2, and state how the construction there shown compared with the structure which you used at the Blackstone Hotel in 1909 and La Salle Hotel prior to that?

A. Well, they look the same, only I can't see the bolt, that is all.

48 Q. How about page 13?

A. It looks to be about the same.

49 Q. The same so far as you can see?

A. Yes sir, so far as I can see. I could not swear to it, I can't see underneath.

By Mr. Blum: This matter is not set up in the answer. Can we have a recess before going on with the cross-examination?

By the Court: Yes.

50 Q. How were the windlasses in the hoisting machines set, relative to the wall of the building, at right angles or parallel?

A. The handles would be along the wall instead of pumping to and from the wall they were pumped just the opposite way.

Cross-examination.

By Mr. Goepel:

51 X Q. Who asked you to come here to-day?

A. Mr. Henderson called me up by phone last night about 9 o'clock.

52 Q. Did he visit you at your home?

A. He met me this morning to take me down to the train.

53 X Q. Did he visit you at your home last night?

A. No sir.

Q. Did you visit him at his hotel?

A. No sir.

54 X Q. He phoned you to meet him to-day?

A. Yes sir.

55 X Q. Where did you meet him?

A. At the house.

56 X Q. He came out to meet you this morning?

A. He came out with his automobile, and he had a fracture and we took the car at 24th street.

57 X Q. He called for you this morning with his automobile at your residence?

A. Yes sir.

205 58 X Q. Did he talk over the matter with you?

A. No sir.

59 X Q. Tell you what it was about?

A. No sir.

60 X Q. Didn't he say anything at all about the patent that was involved here?

A. He did last night on the phone.

61 X Q. What did he tell you?

A. Wanted to know if I would come up here with him and testify about some machines of his and Whitney I believe and the New York Scaffolding Company.

62 Q. Did he tell you his patent was involved here?

A. No sir.

63 X Q. Tell you anything about the structure, of his ideas?

A. No sir.

64 X Q. What were the exact words that Henderson said to you on the phone last night?

A. He called me up last night and asked me if I was La Belle. I told him yes. He told me he was Henderson. He wanted to know if I would come up and testify in Milwaukee this morning. I told him it was hard for me to get away. He said, try, and I will see you in the morning, and if you decide to come, take the train at 8 o'clock, and we missed the train, didn't get it until 9.

65 X Q. You reside in Chicago?

A. Yes sir.

66 X Q. Now, what relations did you have with Henderson?

A. I never seen the man before until this morning.

67 X Q. He just phoned you and you came at his request?

A. Yes sir.

68 X Q. And what did he tell you this morning? State the exact words.

A. Why, he didn't say very much of anything, just wanted to know if I would come up here and testify, and I told him I thought I would, that is, I had to phone down to the yard to see if I could get away, first, and when I got that all fixed up, I said all right, I could come, and I came.

69 X Q. Did he tell you you were to be called on behalf of the plaintiff or defendant?

A. I believe on behalf of Whitney, or something of that kind.

70 X Q. How did Henderson know who you were—how to get you?

206 A. I don't know.

71 X Q. Did he tell you Whitney was a defendant here?

A. He didn't say he was defendant, he just mentioned the name Whitney.

72 X Q. Are you interested in any manner in any of Whitney's enterprises?

A. No sir.

73 X Q. Are you interested in any manner with Henderson's?

A. No sir.

74 X Q. How do you know that the machines you said you saw at the Hotel Blackstone were New York Scaffolding Company machines?

A. Because I received them and shipped them, shipped them away after we got through with them, and a man by the name of Bacher, he was the one that delivered them there, and when he went to take them away I filled out the amount on the receipt and he signed it and we kept one and he kept the other.

75 X Q. Have you those receipts still?

A. No, they are with the Fuller Company.

76 X Q. Did you yourself ship those machines from the hotel to the place of business of the New York Scaffolding Company?

A. I loaded them on the wagon.

77 X Q. Did you accompany the wagon to the place of business of the New York Scaffolding Company?

A. No sir.

78 X Q. Did you do anything more than receive those machines when they got to the place?

A. I put them together and put them up.

79 X Q. You don't know where those machines came from except what you heard?

A. From the bill heads and shipping tags.

80 X Q. You yourself didn't get those machines from the place of business of the New York Scaffolding Company?

A. They were delivered in a wagon. The front part, the boulevard, the granite and stone was delayed a full three stories on Michigan Avenue and on Eighth Street, the brick work and structural iron, to give the stone man a chance to finish, and during that time it was coming on towards cold weather, we had to go to work and take from the 12th story so we could set the machines from the roof down to the 16th, and Bacher came there and didn't have enough machines to supply—to go around the two streets, so he says

207 "It will take three or four days, I will send a telegram to New York, and they will be here in four days," and when they came there they came from New York. I believe six or seven machines.

81 X Q. That is, you saw some boxes, and you presumed they were from New York. You didn't yourself accompany those machines from New York?

A. No, I didn't.

82 X Q. You said in your direct examination that was in the middle of the summer of 1909?

A. 1908. I left in the fall, the brick work was all built inside, the interior work.

83 X Q. When were the machines taken off that building.

A. It was in the fall, going on towards winter of 1909.

84 X Q. They were taken off?

A. Yes sir.

85 X Q. When were they put on?

A. Going on the latter part of the summer of 1908. That is, the court was put on before the other, the front part was delayed, the alley and court, which had no stone or marble work was up nine or ten stories before they started on the other streets.

86 X Q. Do you say it took from the middle of the summer of 1908 until December 1909 to keep those machines?

A. No.

87 X Q. A year and a half?

A. No, a year and a few months. They put them on the court in that time, but on the street two months later.

88 X Q. When did you put them in the court?

A. I don't know the exact date of 1908.

89 X Q. How long were they in the court?

A. I don't know exactly how long.

90 X Q. When did you put them in the north side of the building, front side?

A. That was the court.

91 — Q. When did you put them on the exterior of the building?

A. What do you mean by exterior?

92 X Q. Briefly state what you mean by the court.

A. The north face of the building, and 8th street was the south, the boulevard was the east and the alley was the west.

93 X Q. When did you put them on the sides other than the court?

A. Later on, when we got the granite and stone up.

208 94 X Q. What month of the year?

A. I have not got the dates.

95 X Q. What month?

A. I have not got the month either.

96 X Q. Do you know when you took them off?

A. It was in 1909.

Q. What month?

A. I could not say.

97 X Q. State again when you first put them on the court?

A. 1908.

98 X Q. What month?

A. I could not give the month.

99 X Q. When did you take them off?

A. I have not got the date.

100 X Q. What month?

A. I don't know what month.

101 X Q. Now, during the last year you have seen a lot of these scaffold hoist machines with platforms, haven't you?

A. Yes sir.

102 X Q. And have used a lot of those in Chicago during the last year?

A. I have not used many of them the last year myself. I have seen them around.

103 X Q. And you have seen a lot of them in 1915?

A. Yes sir.

104 X Q. And a large number in 1914?

A. Yes sir.

105 X Q. And in 1913?

A. Yes sir.

106 X Q. 1912?

A. Yes sir.

107 X Q. 1911?

A. Yes sir.

108 X Q. 1910?

A. Yes sir.

109 X Q. 1909?

A. Yes sir.

110 X Q. Those were all machines like those you said you saw at the Hotel Blackstone?

A. All I saw were pretty near the same. Pretty near all the same.

By the Court:

111 Q. Do you mean to say that the apparatus that you had
209 been using in the last five years is just like that used on the
Blackstone and Sherman (LaSalle) in 1907 and 1908?

A. Except on one job, that is the Continental Trust Bank,
that was with a different machine.

112 Q. With that exception the machines you used during all
those nine years have been just like Exhibit 15?

A. Yes sir.

113 Q. No different?

A. No.

114 X Q. Did you make any notes or sketches at the time you
saw those machines at the Hotel Blackstone, of the machines them-
selves?

A. No sir.

115 X Q. Or the fact you saw them at that time?

A. No sir.

116 X Q. Make any of the Hotel LaSalle?

A. That hotel was the first place I seen them, and I took a little
more notice than I did afterwards.

By the Court:

117 Q. What were you using prior to that time?

A. A strap hung machine, strap about two inches wide and about
an about a half inch thick with a hole bored about every foot, and
we used to hang them, with 2 x 6 putlog, bolted right through them
holes.

118 Q. Have you ever seen any other machines than you have
described?

A. I have seen one on the McCormick, and some hanging on
different buildings.

119 X Q. You are positive that the La Salle Hotel was first
scaffolded in 1907?

A. The first I done.

Q. In the end of summer?

A. In 1907, in the summer.

120 X Q. What month?

A. I don't know exactly. I left there on the 4th of January 1908 and the work was pretty near completed. Went from there to the Blackstone.

121 X Q. Where did the machines come from used at LaSalle Hotel?

A. I don't know, Mr. Bacher was the agent furnishing them.

122 X Q. Other than that you don't know where they came from?

A. From the warehouse.

123 X Q. Did you see them come from the warehouse?
210 A. No sir.

124 X Q. Have you got some receipts of those Hotel La Salle things?

A. No, I turned them over to the office.

125 X Q. And was the New York Scaffolding Company named in those receipts?

A. Yes sir.

126 X Q. You are sure of that?

A. Yes sir.

127 X Q. No doubt whatever?

A. No sir.

128 X Q. That was in 1907, at the end of the year?

A. Yes sir.

129 X Q. Those first machines you testified about, at the Hotel Blackstone and Hotel LaSalle were made as tight as possible between the putlogs and frames, were not they as you testified on your direct examination? What do you mean by tight?

A. We had to tighten them. We had to tighten the putlog on the bottom of the U-frame.

130 X Q. So that the putlogs and frames were rigidly connected with each other?

A. Yes sir.

131 X Q. No doubt of that in your mind?

A. No.

Redirect examination:

132 X Q. What do you mean by rigidly connected together?

A. We connected them before we hung them. They came in parts, we had to fasten the putlogs on the bottom of the U, and then hung them and put the plank on afterwards.

133 X Q. Could the frames when you elevated them with the pipe by turning the windlass, swing from one bolt to the other?

A. No sir.

211 The witness ELIAS H. HENDERSON recalled by defendants, testified:

1 Q. I asked you yesterday, after leaving the stand, to look up my papers you had with reference to your patent. Have you found the sketch which counsel for the plaintiff inquired about yesterday?

A. I have.

2 Q. Will you produce it?

(Witness produces sketch.)

3 Q. What is that sketch?

A. That is the sketch of the scaffold hanger that I designed for Mr. Merrill.

4 Q. Is that sketch dated, and if so, what is the date of it?

A. It is June 15, 1909.

5 Q. When was that date put on there?

A. June 15th, 1909.

6 Q. Had you made any sketch prior to that time, of this device?

A. I did not make any sketch. I made a pencil drawing. I worked out the design on a drawing board in pencil and made these drawings from the original drawing.

7 Q. Where did you find that sketch?

A. In the basement of my home.

8 Q. When did you find it?

A. Last night about 11:30.

9 Q. And where has it been since you first made it?

A. Well, Brown & Williams, my attorneys in Chicago had it for some time, and they returned it to me attached to a copy of the application for patent, and it has been in my files ever since.

10 Q. And have you a copy of the application that was returned with it?

A. I have. There is a copy of the application attached to —, and returned to me by Brown & Williams.

11 Q. When was it returned?

A. The copy of the application returned to me I should judge about the latter part of the month of June, after June 20th, after I made the application.

Counsel for defendants offer in evidence the sketch just referred to by the witness, and the specifications also referred to, as defendants' Exhibit No. 18.

212 Cross-examination.

By Mr. Goepel:

12 X Q. What does "Case 2" mean, found at the end of the paper you produce?

A. That means the second application for patent that I made through Brown & Williams.

13 X Q. The first one was on a scaffold device also was not it?

A. Yes sir.

14 X Q. There is no doubt of the fact you had an application before this one? That is right, is not it?

A. Before this application? I don't know. These papers may have got mixed up and become detached and become attached to another set of applications, because they are on file together.

15 X Q. You think may be what was case No. 1 got mixed up with case No. 2, and now you have produced a paper that is not really the paper you intended to produce?

A. I didn't intend to produce any paper at all. This was attached as I found it last night, and I know the copy of the application, the first application, was returned to me with the original sketch. I had not inspected this prior to your calling my attention to it, at this time.

16 X Q. You have no doubt that "Case 2" means the second application?

A. The second application.

17 X Q. Have you any doubt that thing you have in your hand is a copy of the second application?

A. I don't know whether it is a copy of the second application. I will read it over and see. I can tell by comparing it with the patent issued in Case 2.

18 X Q. What was that patent? The patent here in suit, do you mean?

A. No, it is not the one in suit.

19 X Q. Have you got it here?

A. Yes, I have it in my file, at least I think I have. I should have compared it, the patent with the application, to know whether it was case 2 or 1. The designation of Case 2 in this application is some designation which Brown & Williams used in their office to designate this application, this is a copy of the specifications and application of the first patent for scaffold support which I filed, which is No. 959,008.

20 X Q. That is the patent here in suit you refer to?

A. Yes sir.

20 X Q. And the papers you produce and which you swore to as being a copy of the papers connected with the conception, those papers relate to this patent in suit?

A. Yes sir.

20 X Q. And that is case No. 1?

A. No, that was the first patent application on scaffold supporting means that I applied for. It appears it is designated as case No. 2 in Brown & Williams' files, according to a copy of their application.

21 X Q. With what did you compare the type written copy of the invention—of the patent in suit, when you took this time to compare—with what patent? Give the number.

A. 959,008.

21 X Q. You compared it with another patent?

A. Yes sir. I filed three or four patents on scaffold supporting means.

22 X Q. And you just now made a comparison between the patent in suit and some other devices?

A. I compared the patent in suit with the specification.

23 X Q. And you also looked at some other patents?

A. Yes, when you called my attention to Case 2.

24 X Q. To be brief; read the numbers of the patents into the record which you looked at in making this comparison.

A. I looked at patent 959,008 and patent No. 1,035,703.

25 X Q. Any others?

A. That is all.

26 X Q. You didn't hesitate at all to swear to the fact that the copy you produced was the thing that Brown & Williams handed to you—returned to you, without comparison with any papers?

A. That is the copy that was returned to me attached to the sketch, by Brown and Williams.

By the Court:

27 Q. What date did you make application for your second patent?

A. I can't say the date that I made application for the second patent without reference to the records in these files.

28 X Q. What does your second patent show with reference to the application in the Patent Office?

A. Without reference to the files I cannot tell.

29 X Q. You have a copy of the patent?

A. I don't know whether this was the second patent or third or fourth.

30 X Q. Were those applications for those different patents pending in Brown & Williams' office at the same time?

214 A. They were not pending at the time the first application was filed, they were filed at different periods subsequent one to the other.

31 X Q. Was there more than one application pending at the time the first patent was pending in Brown & Williams' office?

A. There was only one application for scaffold supporting means; but I had pending in that office four or five patents for—let me see, one patent for gas engine improvements, and I subsequently filed four or five applications, one for gas engine improvements and two on engines.

32 X Q. Had you been doing business with Brown & Williams prior to the time you made application for the patent here in suit?

A. Yes, I had previously applied for a patent on the gas engine.

33 X Q. At the time this matter of the patent in suit was pending in their office, you had no other business except the gas engine application?

A. That was all.

34 X Q. Is it your idea that the quotation contained in this document which is identified as Case No. 2, grew out of that situation?

A. I believe it does.

35 X Q. Can you tell us when you made the next application to Brown & Williams for that next scaffolding device?

A. I think in October 1909 I made my second application for patent.

36 X Q. When did you take up the matter with Brown & Williams when you engaged them to take up the matter of the second application?

A. I think it was in October, 1909. It was in the fall of 1909. I can tell exactly by referring to a letter. I think there are some letters relative to that.

By Mr. Lane. You may produce all the letters written by Brown and Williams, if you have no objection.

Witness: Here is a letter from Brown & Williams dated May 21st, 1909, addressed to me at 5017 Fifth Avenue, Chicago.

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DEFENDANTS' EXHIBIT No. 19.

"Mr. E. H. Henderson, 5017 Fifth Avenue, Chicago, Illinois.

DEAR SIR: We are sending you enclosed a set of blue prints for your file of the drawings sent to Washington as a part of the amendment recently made in your Case 1, for Gas Engines.

Yours very truly,

BROWN & WILLIAMS."

(Letter just read marked "Defendants' Exhibit No. 19.")

By the Court:

37 Q. How many applications did you make for patents on gas engines?

A. I think there were, on that particular type of engine, there was—well, there was one on a valve, a rotary valve—

Redirect by Mr. Lane:

38 Q. How many were there?

A. I think there were three, I am not positive.

39 Q. Are there any other letters received by you from Brown & Williams relative to the prosecution of this application?

A. Here is one dated November 6th, 1909,—

In accordance with your instructions of even date, we shall proceed with the prosecution of your case No. 2 for Scaffold Supporting Means.

You are correct in understanding that our charge for prosecuting this case to final allowance or rejection before the Primary Examiner is \$25.00, and we are charging this amount to your account in this connection."

According to my recollection from looking over these things, they designate the application by numerals, according to the art in which the application was made, whether gas engine of scaffold or whatever it was.

(Letter read in evidence by the witness offered in evidence and marked "Defendants' Exhibit No. 20.")

Letter of March 3, 1910, addressed to E. H. Henderson, 5017 Fifth Avenue, Chicago, and signed Brown & Williams, read as follows:

"We are sending you enclosed a copy of an amendment just prepared in connection with your case 2 for Scaffold Supporting Means.

As we explained to you personally when in our office yesterday, the Examiner when the matter was presented to him at an

oral interview, while reluctant to admit that there was much novelty in your device, finally indicated his willingness to act

favorably upon claims such as are now presented to him by the present amendment. As a result, if no new reference is found, we anticipate that the next action in the case will be favorable.

"As soon as we hear further from the matter we shall advise you."

Letter marked "Defendant's Exhibit No. 21."

By Mr. Lane: I have been requested to produce a catalogue, and here produce these catalogues and offer them in evidence as the catalogues showing the constructions which have been put out by the Scaffolding Company.

By Mr. Blum: Objected to. We have never heard of a catalogue proving itself. We don't want it.

40 Q. Who are John Griffiths and George W. Griffiths, who were sued by the New York Scaffolding Company in this suit, copy of which I hand you?

A. They were contractors in Chicago to whom the Henderson Scaffold Hoisting Company sold about 100 machines.

41 Q. Who defended that suit?

A. Mr. Linthicum.

42 Q. Did the Griffiths or you?

A. Mr. Linthicum—well, I conferred with Mr. Linthicum, and agreed to hold them harmless.

43 Q. What machine was involved in that suit, do you know?

A. They were using the worm gear machine similar to the one in evidence, Exhibit 15.

Recross-examination:

44 X Q. How did the machines which were put out by you and sold to John Griffiths, in connection with the basis of this suit compare with the construction of your patent, the Henderson patent in suit?

A. In construction they are the same, with the exception of the hoisting mechanism to operate the drum. On the machine sold to Griffiths a worm gear was used to turn the drum, while on the machine shown in the patent, according to the drawing, a gear, an ordinary pinion gear and crank was used to turn the drum.

45 X Q. Were these machines used sidewise or edgewise to the building by Griffiths?

A. They were used broadside to the building.

217 By Mr. Lane:

46 Q. What time was the time of use of the Griffiths?

A. Griffiths used the machines on the Sherman House.

By the Court:

47 Q. When, was the question.

A. About in March 1910.

Plaintiff's Rebutting Testimony.

By Mr. Blum: We have practically no rebuttal to offer. The only point is that upon discussing the evidence of Mr. French with him there was a little confusion as to exactly what he testified. We recall him as to one point.

Testimony of Alfred W. French.

ALFRED W. FRENCH recalled by plaintiff, testified:

Examined by Mr. Blum:

1 Q. In the Whitney Scaffold Hoist machines about which you testified in your former examination, and as shown in the exhibit, was it possible to take the operating handle and hold it vertical so it could be out of the way of the workman?

A. Yes sir.

2 Q. What could be done so as to keep the handle vertical and out of the way of the workmen?

A. It could be tied up.

3 Q. I ask you to look at Plaintiff's Exhibit No. 4, figure 1, and state whether a tying or fastening could be done as shown in this picture?

A. Yes.

Question objected to as calling for the conclusion of the witness. He can testify as to what he actually saw, but not as to what could be done.

Cross-examination.

By Mr. Lane:

4 X Q. As a matter of fact in the use of this Whitney Scaffold Hoisting device you say used, the boards, the plank, were oftentimes put in the inner end of the putlogs between the frames and building, were not they?

A. I don't ever recollect seeing frames on the inside.

5 X Q. You don't remember as to that. Were these planks notched as shown in Exhibit No. 17, so they slipped down into the upright bars of the hoisting device which you saw?

A. The ones I saw were not notched.

5 X Q. Then this does not correctly represent anything you saw, Plaintiff's Exhibit No. 17?

A. I can't say that, but the plank there is notched, by this picture.

6 X Q. Didn't you see any of these structures known as Whitney Scaffold Hoist Machines put out as shown on page 11 of this circular which I now hand you? That is, according to the instructions there?

Objected to—whether this is before the filing of the bill of complaint?

7 X Q. At any time?

By the Court: He may answer.

Exception.

A. I cannot remember seeing them put up just that way.

8 X Q. Do you recall any as being put up as shown on page 9 of that circular?

(Objected to.)

At any time prior or subsequent to the filing of the bill?

Same objection. Overruled. Exception.

A. I don't recall seeing any notched as it would appear there in this picture.

Catalogue marked for identification "Defendants' Exhibit 22."

9 X Q. You never saw any Whitney Scaffold Hoist Machines exactly as shown in that print at any time, did you?

(Indicating Fig. 1 of patent No. 998,270.)

A. If those putlogs are resting on the bottom—or on the top of the cross-bars—bottom—I have seen them rigged like that. That is the way they appear to me in the picture.

10 X Q. Where did you see one like that?

Objected to, as going beyond the examination on the specific point upon which he was called back. Overruled. Plaintiff excepts.

A. It was set up to demonstrate on the Bell Telephone building.

11 X Q. Just for demonstration?

A. Yes sir.

By Mr. Blum: The only further matter before us, subject to the ruling on public use and any evidence we may have the privilege of taking I offer the file wrappers of these two patents. The Whitney Scaffold and Little Wonder are made under patents already in evidence.

Objected to as coming after the date of the patent in issue, and having nothing to do with the controversy at all, not connected in any way to the devices made by the defendant.

Received. Defendant excepts.
Marked "Plaintiff's Exhibits 26 and 27."

Testimony closed.

(Exhibit 26 is File Wrapper Patent to Egbert Whitney No. 1,114,832.

Exhibit 27 is File Wrapper Patent to Egbert Whitney No. 998,270.)

Statements of Court and Counsel.

June 1st, 1916, 2 p. m.

By Mr. Lane: The amendment your honor permitted us to make subject to their right to examine, I would like to present.

"Come now the defendants in the above entitled cause, Chain Belt Company and Egbert Whitney, and, with leave of court first had file this their joint and several amendment to their joint and several answers filed herein:

Defendants allege that the device disclosed and claimed in the Henderson Patent No. 959,008 was known to and publicly used in the United States by the following:

New York Scaffolding Company, New York City, at Chicago, Ill.

Patent Scaffolding Company, New York City, at Chicago, Ill.

Patent Scaffolding Company of Ill., Chicago, Ill., at Chicago, Ill.

George A. Fuller Co., Chicago, Ill., at Chicago, Ill.

Louis La Belle, Chicago, Ill., at Chicago, Ill., prior to the date of said alleged invention of Elias H. Henderson.

By Mr. Blum: We feel this is a matter within your honor's discretion. We really cannot see anything except to leave it to your honor's discretion. If your honor thinks that justice requires this to be done, your honor will impose suitable terms. Personally we object to this.

By the Court: Amendment allowed, but in respect to terms, I assume that is a matter within the discretion of the court.

220 By Mr. Blum: The matter is within your honor's discretion.

By the Court: As it is, I would not hesitate to grant leave for you to meet the evidence introduced under the amendment as you say you came without notice.

By Mr. Blum: There was not anything set up in the answer, and it came as a bolt out of the blue. Whether it is worth while doing that or not, we do not think there is much in the prior use testimony that amounts to anything, and it may not be necessary for us to go ahead, proceed to any further proofs, but get the matter finished to-day. We have been allowed to go to trial without having notice, and the plaintiff's expenses should be paid by the defendant.

By the Court: There is no doubt about the range of discretion. It is very wide. You may discuss the case on the evidence here.

(Argument.)

PLAINTIFF'S EXHIBIT 2.

Piff. Exh. 2.

2-392.

Department of the Interior,
United States Patent Office.

Received and Recorded on the 7th day of March, 1911, in Liber
A. 86, page 499 of Transfers of Patents.

In Testimony Whereof, I have caused the seal of the Patent
Office to be hereunto affixed.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.

Assignment.

Whereas, I, Elias H. Henderson, of Chicago, in the County of
Cook, and State of Illinois, did obtain letters patent of the United
States for an improvement in Scaffold Supporting Means, which let-
ters patent are number 959,008 and bear date the 24th day of May,
in the year 1910;

And Whereas, he is now the sole owner of said patent, and of all
rights under the same; and whereas, The Henderson Scaffold Hoist
Company, of Chicago, County of Cook, State of Illinois, are desirous
of acquiring the entire interest in the same;

221 Now Therefore, To All Whom It May Concern: Be it
known that, for and in consideration of the sum of Two
Thousand Dollars, to him in hand paid, the receipt of which is
hereby acknowledged, I, the said Elias H. Henderson, have sold,
assigned and transferred, and by these presents do sell, assign and
transfer, unto the said The Henderson Scaffold Hoist Co., the whole
right, title and interest in and to the said improvement in —, and
in and to the letters patent therefor aforesaid;

The Same to be held and enjoyed by the said Henderson Scaffold
Hoist Co., for its own use and behoof, and for the use and behoof of
its legal representatives, to the full end of the term for which said
letters patent are or may be granted, as fully and entirely as the
same would have been held and enjoyed by me had this assignment
and sale not been made.

In Testimony Whereof, I have hereunto set my hand and affixed
my seal, at Chicago, in the County of Cook and State of Illinois, this
27th day of June, A. D. 1910.

(Signed)

ELIAS H. HENDERSON. [SEAL.]

Signed, sealed and delivered in presence of

(Signed)

OTTO LOESCHER.

STATE OF ILLINOIS,

County of Cook, ss:

I, David M. Ball, a Notary Public in and for the said Cook County, in the State aforesaid, do hereby certify, that Elias H. Henderson, personally known to me to be the same person whose name is subscribed to the foregoing Instrument, appeared before me this day in person, and acknowledged that he signed, sealed and delivered the said Instrument as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal, this twenty-seventh day of June, A. D., 1910.

(Signed)

[SEAL.]

DAVID M. BALL,
Notary Public.

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PLAINTIFF'S EXHIBIT 3.

Plff. Exh. 3.

2-392.

Department of the Interior,

United States Patent Office.

Received and Recorded on the 2nd day of June, 1911, in Liber 0, 86, page 394 of Transfers of Patents.

In Testimony Whereof, I have caused the seal of the Patent Office to be hereunto affixed.

[SEAL.]

E. B. MOORE,
*Commissioner of Patents.**Assignment.*

Whereas, The Henderson Scaffold Hoist Company, of Chicago, a corporation organized and existing under the laws of the State of Illinois, is now the sole owner of Letters Patent of the United States No. 959,008, issued May 24, 1910, to Elias H. Henderson, for new and useful Improvements in Scaffold-Supporting Means, and of all rights under the same;

And Whereas, New York Scaffolding Company, of New York, a corporation organized and existing under the laws of the State of New York, is desirous of acquiring an interest in the said Letters Patent;

Now Therefore, for and in consideration of One Dollar to it in hand paid, the receipt of which is hereby acknowledged, and for other good and valuable consideration, the said The Henderson Scaffold Hoist Company hereby sells, assigns and transfers unto the said New York Scaffolding Company, the entire right, title and

interest in and to the said improvements and in and to the said Letters Patent therefor;

To have and to hold unto the said New York Scaffolding Company, its successors and assigns, for the full term of the said Letters Patent.

In Testimony Whereof, the said The Henderson Scaffold Hoist Company, has caused these presents to be signed by its President and the corporate seal hereunto affixed this 12th day of May, 1911.

(Signed)

THE HENDERSON SCAFFOLD
HOIST COMPANY,

[SEAL.]

By O. C. JUNGES, *President.*

PLAINTIFF'S EXHIBIT 3.

STATE OF ILLINOIS,

County of Cook, ss:

On this 12th day of May, 1911, before me personally appeared O. C. Junges, to me known and known to me to be the President of The Henderson Scaffold Hoist Company, who executed the foregoing assignment, and thereupon duly acknowledged to me that he executed the same for the purposes therein mentioned.

(Signed)

DAVID M. BALL,

[SEAL.]

*Notary Public in and for the County
of Cook, in the State of Illinois.*

PLFF. EXH. 8.

File Wrapper and Contents of Henderson Patent No. 959,008.

Copy.

United States Patent Office,

Department of the Interior,

United States Patent Office.

To all whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the Records of this Office of the File Wrapper and Contents in the matter of the Letters Patent of Elias H. Henderson. Number 959,008, granted May 24, 1910, for Improvement in Scaffold-Supporting Means.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington, this 25th day of November, in the year of our Lord one thousand nine hundred and twelve and of the Independence of the United States of America the one hundred and thirty-seventh.

[SEAL.]

F. A. TENNANT,

Acting Commissioner of Patents.

224

2—437.

Div. 29.

Number (Series of 1900).

503,053

1909.

Patent No. 959,008

(Ex'r's Book). 267-8.

Name Elias H. Henderson, of Chicago,

County of —,

State of Illinois.

Invention Scaffold Supporting Means.

Parts of Application Filed	Original.		Renewed.
{	Petition	June 19, 1909	, 190
	Affidavit	" " , 1909	, 190
	Specification	" " , 1909	, 190
	Drawing 2 sheets	" " , 1909	, 190
	Model or Specimen	, 190	, 190
	First Fee Cash \$15	June 19, 1909	, 190
	" " Cert.	, 190	, 190
	Appl. filed complete	June 19, 1909	, 190
Examined Ballard N. Morris		Apr.	, 190
Ballard N. Morris		April 25, 1910	, 190
Countersigned W. W. Mortimer		W. W. Mortimer	, 190
		For Commissioner. For Commissioner.	
Notice of Allowance		Apr. 5, 1910	April 27, 1910
Final Fee Cash \$20—		April 18, 1910	, 190
" " Cert.		, 190	, 190
Patented		May 24	, 1910
Associate Attorney		Attorney Brown and Williams	
		1550 Monadnock Bldg.	
		Chicago, Ill.	
Name		Serial No.	
Patent No.		Date of Patent	

In left-hand margin: Division of App. No.

, 190

, filed

225

503,053.

\$15.00, Ck., Received Jun- 19, 1909. H. Chief Clerk, U. S. Patent Office.

Chicago, June 15, 1909.

Hon. Commissioner of Patents, Washington, D. C.

SIR: We enclose, herewith, the petition, specification, oath and drawings in the matter of the application of Elias H. Henderson

(Case #2), for Improvement in Scaffold Supporting Means; also our check for \$15.00 in payment of the first Government fee.

Yours very truly,

BROWN & WILLIAMS.

Mail Room,
Jun- 19, 1909,
U. S. Patent Office.

Serial No. 503,053, Paper No. 1.

Application.

Petition.

To the Commissioner of Patents:

Your petitioner, Elias H. Henderson, a citizen of the United States, residing at Chicago, in the County of Cook and State of Illinois, Post-office address, 5017 Fifth Avenue, Chicago, Illinois, prays that Letters Patent may be granted to him for the new and improved Scaffold Supporting Means (Case 2) set forth in the annexed specification; and he hereby appoints Charles A. Brown and Lynn A. Williams, of the copartnership of Brown & Williams (Reg. No. 8461), of 1550 Monadnock Building, Chicago, Illinois, his attorneys, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith.

ELIAS H. HENDERSON.

To all whom it may concern:

Be it known that I, Elias H. Henderson, a citizen of the United States, residing at Chicago, in the County of Cook and State
226 of Illinois, have invented certain new and improved Scaffold-Supporting Means, of which the following is a full, clear, concise and exact description, reference being had to the accompanying drawings forming a part of this specification.

My invention relates to an improved means for supporting scaffolds used in connection with the construction of buildings and their repair. Scaffolds for this purpose are preferably of the swinging type supported by cables from outriggers temporarily secured to the upper part of the building.

It has been the practice in the past to associate hoisting means with the cables at the outriggers, and in some cases it has been proposed to use such hoisting means in connection with the cables on the scaffold to adjust the height as required in connection with the work.

My invention relates to an improved form of hoisting mechanism carried by the scaffold for securing the same to the cables, the upper ends of which are connected to outriggers, generally, temporary

in character, secured to the upper portion of the building. It is an object of my invention to construct such a hoisting mechanism in such a manner that it results in a maximum degree of security and a minimum cost of production.

The several drawings illustrating my invention are as follows:

Figure 1 is a perspective view of the framework of a building showing my scaffold supporting means in place upon a scaffold.

Figure 2 is an enlarged side view of a portion of the scaffold shown in Figure 1.

Figure 3 is a top view of a modified form of scaffold narrower than the scaffold shown in figure 1.

Figure 4 is a side view of the scaffold shown in Figure 3.

Figure 5 is a side view of the hoisting mechanism used in connection with each supporting cable.

Figure 6 is a face view of the mechanism shown in figure 5.

Similar numerals refer to similar parts throughout the several views.

As shown in Figure 1, the framework 1 of the building supports at its upper portion a plurality of outriggers 2, from the overhanging portions of which cables 3 depend. Each of these cables 3 is connected at its lower end to a hoisting mechanism 4, which together serve to support the scaffold 5.

As indicated in figure 2, the frame 6 of each hoisting mechanism is so formed as to pass around the end of a cross piece 7 used to support the platform 8 of the scaffold 5.

The detail construction of each hoisting mechanism is more clearly shown by reference to figures 5 and 6. Each of such mechanisms consist of a frame 6, preferably of bar iron, bent into the shape of a U, and when so formed adapted to pass around and support one end of one of the cross pieces 7 referred to above. The upwardly extending ends of the frame 6 have extending between them a round bar 9 which forms the support for a drum 10 used to receive the cable 3, the end of which is secured to the drum by means of a cable clamp 11. The drum 10 carries at its right-hand end, as shown in figure 5 a gear 12 which meshes with a pinion 13 secured to the shaft 14, which is revolvably supported in the upwardly extending ends of the frame 6. The shaft 14 is squared at its ends to be engaged by cranks 15 at either or both of such ends, as desired, for the purpose of rotating the shaft 14 and drum 10. The upper ends of the frame 6 are held in proper relative position by means of a bolt 16, upon which are secured collars 17 to properly space the ends of the frame 6. The bolt 16 rotatably supports a locking pawl 18 adapted to engage the gear 12 carried by the drum 10 for the purpose of holding such drum positively in any position to which it may be moved by the operation of the crank 15. A second pawl 19 is indicated as supported by a rod 20 extending between the side members of the frame 6, which pawl, as indicated at 19^a, is adapted to be engaged by the foot of the person operating the drum to remove such pawl from engagement with the gear 12 carried by the drum.

The hoisting mechanism just described is also adapted for use in connection with comparatively small scaffolds which are much nar-

rower than the style of scaffold shown in figure 1. In this connection, one hoisting mechanism may be used at each end of the scaffold 21, as shown in figures 3 and 4. In connection with scaffolds of this type, it is generally desirable to locate a supporting timber 22 longitudinally of the scaffold 21 on its under side and substantially under the middle of the scaffold. This timber has placed upon it cross pieces 23, upon which the floor 24 of the scaffold is laid. The frames 6 of the hoisting mechanisms in this modification are built to pass around the ends of the timber 22 to support the scaffold.

From the above it will be seen that my construction secures the greatest possible amount of security since the frame 6 passes around the supporting beams of the scaffold in such a way that no auxiliary means are required to secure the hoisting mechanism to the scaffold. Furthermore, the construction is made very simple, and the machines can be cheaply made on account of the small number of parts, and further on account of the single bar constituting the framework of the machine serving also as the bearings and bearing supports for the hoisting mechanism.

While I have shown my invention in the particular embodiment herein described, I do not, however, limit myself to this construction, but desire to claim any equivalent that will suggest itself to those skilled in the art.

I Claim:

1. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam,

Per B. each hoisting device consisting of a ^{continuous} U-shaped metal bar extending around Δ and upward from the associated hoisting

Per A. beam and a Δ drum rotatably supported by the side members of such bar.

2. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the associated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, such drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, and gearing between the drum and the crank shaft.

(*3. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the asso-

Canceled
Per B.

*Matter in italics in parentheses, stricken out in original transcript.

229 ciated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, such drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, gearing between the drum and the crank shaft, and a pawl for locking the drum in any desired position, such pawl pivoted to such bar and adapted to be released from the drum by the foot of the operator.

4. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extending upwards, and a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold.

5. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, and gearing between the drum and crank shaft.

6. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly extended ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, gearing between the drum and the crank shaft, and a pawl for locking the drum in any desired position, such pawl adapted to be released from the drum by the foot of the operator.

7. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, and gearing between the drum and the crank shaft, the upwardly extending ends of such bar constituting the bearings of such drum and crank shaft.

8. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly ex-

tending ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, gearing between the drum and the crank shaft, the upwardly extending ends of such bar constituting the bearings of such drum and crank shaft, and a gravity pawl for locking the drum in any desired position, such pawl pivoted to such bar and adapted to be released from the drum by the foot of the operator.)

Insert>

A.

In witness whereof, I hereunto subscribe my name this 16th day of June, 1909.

ELIAS H. HENDERSON.

Witnesses:

ALBERT C. BELL.

ROBERT F. BRACKE.

Oath.

STATE OF ILLINOIS,

County of Cook, ss:

Elias H. Henderson, the above-named petitioner, being duly sworn, deposes and says that he is a citizen of the United States, and resident of Chicago, in the County of Cook and State of Illinois, and that he verily believes himself to be the original, first and sole inventor of the new and improved Scaffold Supporting Means (Case 2) set forth and claimed in the annexed specification; that he does not
231 know and does not believe that the same were ever known or used before his invention or discovery thereof; or patented or described in any printed publication in the United States of America or any foreign country before his invention or discovery thereof, or more than two years prior to this application; or in public use or on sale in the United States for more than two years prior to this application, and that no application for foreign patent has been filed by him or his legal representatives or assigns in any foreign country.

ELIAS H. HENDERSON.

Subscribed and sworn to before me this 16th day of June, 1909.

[SEAL.]

ALBERT C. BELL,

Notary Public.

2—260.

Div. 29, Room 147.

Paper No. 2.

Address only "The Commissioner of Patents, Washington, D. C.," and not any officer by name.

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

M. P. T.

Department of the Interior,
United States Patent Office.

Washington, D. C., Aug. 31, 1909.

Mailed " " "

Elias H. Henderson, c/o Brown & Williams, 1550 Monadnock Block,
Chicago, Ill.:

Please find below a communication from the Examiner in charge of your application for patent for Scaffold Supporting Means; filed June 19, 1909; #503,053.

E. B. MOORE,
Commissioner of Patents.

232 The following references are cited:

Murray,	854,959;	May 28, 1907;	(20-82).
Howe,	775,704,	Nov. 22, 1904;	(227-23).
Bowyer, et al.	382,252,	May 1, 1888;	(20-82).
Sladek,	607,805;	July 19, 1898;	(20-82).
Harpin, et al.	763,884,	June 28, 1904;	(20-82).
Crandall,	797,722;	Aug. 22, 1905;	(20-82).

None of the claims are seen to present invention over Murray. To arrange this U-shaped frame with the closed end down so as to extend around the cross bar, would be obvious if desired.

As to Claims 3, 6 and 10, the positioning of a pawl so it may be operated by one's foot does not constitute invention,—see also Sladek, Crandall, Harpin and Bowyer et al.

F. M. WARD,
Act'g Ex'r, Div. 29.

SOPER.

Mail Room,
Nov. 15, 1909,
U. S. Patent Office.

U. S. Patent Office,
Nov. 16, 1909,
Division XXIX.

Serial No. 503,053, Paper No. 3.

United States Patent Office.

A.

Applicant—Elias H. Henderson.
Invention—Scaffold Supporting Means.
Serial No. 503,053.

Case 2.
Room 147.

Filed June 19, 1909.

1550 Monadnock Block,
Chicago, November 11, 1909.

Hon. Commissioner of Patents, Washington, D. C.

SIR: In response to the last Official Action, paper No. 2, applicant amends his above-entitled application as follows:

Claim 1, line 5, after "around" insert the under side of.

Claims 4, 5, 6, 7, and 8, line 2, before "support" insert directly carry and.

Add the following claim:

3 *(9.) A scaffold consisting of a plurality of U-shaped bars arranged in pairs, a cross beam
laid

Per B. 233 *(*laid*) [^] in and extending between each pair of
A'. such U-shaped bars, a floor laid upon said cross beam, a drum rotatably supported between the upwardly extending side members of each of said U-shaped bars, and means for controlling the rotation of said drum.

NOTE: It is considered that each of the claims presented are allowable over the patent to Murray 854,959, the Examiner's principal citation, and, in fact, any of the other references to which he has incidentally referred.

It is the primary requisite of a device of the class to which this invention relates that it be secure, and all efforts are directed in this behalf. In a chain of parts between a primary support and the scaffold upon which a workman stands a number of connections are necessarily employed, and it follows that the security of the device will vary inversely as the number of members in such a chain. Each connection employed makes another danger point, if such it may be termed, and it is the object of applicant's invention to make a desir-

*Matter in italics in parentheses, stricken out in original transcript.

able construction, so far as hoisting mechanism is concerned, enough to be practical and worthy of confidence. Claim 1 specifies that the U-shaped metal bar extends around the under side of the beam, while the ends thereof extend upwardly. Thus the connection between the U-shaped bar and the cross beam is absolute and positive and no connecting rivets, bolts or other auxiliary means are employed. Hoisting mechanism is mounted directly between the ends which thus extend from the beam, and the desirable security is thus effectively realized.

Claims 2 and 3 specify that the metal bar is formed around the beam. This is, of course, different from the Murray structure and it is submitted that it merits patent protection. Although claims 4 and 8 as originally filed may be considered in the light of the above argument, it has been thought wise to further specify that the metal bar is bent to directly carry and support the beam.

Favorable consideration is urged.

Respectfully,

ELIAS H. HENDERSON,
By BROWN & WILLIAMS,
Attorneys.

234 Div. 29, Room 147.

Paper No. 4

M. P. T.

Department of the Interior,
United States Patent Office.

Washington, D. C., December 14, 1909.

Mailed, " " "

Elias H. Henderson, c/o Brown & Williams, 1550 Monadnock Bldg,
Chicago, Ill.:

Please find below a communication from the Examiner in charge of your application for patent for Scaffold Supporting Means; filed June 19, 1909; #503,053.

E. B. MOORE,
Commissioner of Patents

In response to amendment of Nov. 15, 1909:

The claims are seen to present mere colorable and mechanical variations over Murray as previously applied. At best they present no invention over Murray in view of Bouyer et al. showing a frame closed at the bottom.

B. N. MORRIS,
Ex'r, Div. 29.

SOPER.

Serial No. 503,053. Paper No. 5.

B.

Mail Room,
Mar. 7, 1910,
U. S. Patent Office.

U. S. Patent Office,
Mar. 8, 1910,
Division XXIX.

United States Patent Office.

Case 2.

Room 147.

Filed June 19, 1909.

Applicant—Elias H. Henderson.
Invention—Scaffold Supporting Means.
Serial No.—503,053.

1550 Monadnock Block,
Chicago, March 3, 1910.

Hon. Commissioner of Patents, Washington, D. C.

Sir: In reply to the last office Action (Paper No. 4) applicant hereby amends as follows:

235 Claim 1, line 4, after "a" insert continuous

Line 5 before "drum" insert hoisting

Cancel claims 3 to 8 inclusive.

Claim 9 line 2 cancel "lain" and substitute laid.

Renumber claim 9 as claim 3.

NOTE: Claim 1 has been revised to more clearly and pointedly bring out the essential feature of the invention consisting of the structure of the windlass frame by which it directly supports the scaffold members and this without resorting to a complicated frame of built up structure but by the use of a frame consisting of a single bar of metal bent so as to support one end of a scaffold member without the need of securing such member thereto.

As a result of an interview had with the Primary Examiner and with the Examiner in charge of this case, it is respectfully asked that claims 2 and 3 be reconsidered since in each is recited the combination of the scaffold, its supporting members and the frames of the windlass in such a manner that the frames comprising bent U-shaped bars serve to support the scaffold directly and without need of fastening the scaffold supporting members to the windlass. It will be remembered that at the interview mentioned, it was pointed out that the applicant's structure is much simpler, cheaper to make and more

effective than any of the structures shown in the references, and further that none of the structures of the prior art are adapted to support the scaffold without either positively securing the windlass frame to the scaffold or using a complicated structure for the windlass frame. It was pointed out that the windlass frame used by the applicant consists of a single bar of metal bent in the form of a U, the bent portion receiving directly and supporting, without the need for securing to it, the supporting member of the scaffold and that the upwardly extending ends of the bent bar receive between them and constitute the bearings for the drum of the windlass. It is thought that the claims recite combinations which are in accord with the suggestions made by the Primary Examiner at the interview mentioned and favorable action is therefore requested.

Respectfully,

ELIAS H. HENDERSON,
By BROWN & WILLIAMS,
Attorneys.

236

Serial No. 503,053.

D. S.

Department of the Interior,
United States Patent Office,

Washington, D. C., April 5, 1910.

Elias H. Henderson, Care Brown & Williams, 1550 Monadnock Bldg., Chicago, Ill.

SIR: Your application for a patent for an Improvement in Scaffold Supporting Means, filed June 19, 1909, has been examined and Allowed.

The final fee, Twenty Dollars, must be paid not later than Six Months from the date of this present notice of allowance. If the final fee be not paid within that period the patent on this application will be withheld, unless renewed, with an additional fee of \$15, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

When you send the final fee you will also send, Distinctly and Plainly Written, the name of the Inventor and Title of Invention as Above Given, Date of Allowance (which is the date of this circular), Date of Filing, and, if assigned, the Names of the Assignees.

If you desire to have the patent issue to Assignees, an assignment containing a Request to that effect, together with the Fee for recording the same, must be filed in this office on or before the date of payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of Five Cents Each. The money should accompany the order. Postage stamps will not be received.

Final fees will Not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,

E. B. MOORE,
Commissioner of Patents.

(In left-hand margin:) In remitting the final fee give the serial number at the head of this notice.

(In right-hand margin:) Uncertified checks will not be accepted.

\$20, Ck., Received Apr. 18, 1910. D. Chief Clerk, U. S. Patent Office.

Chicago, April 15, 1910.

Commissioner of Patents, Washington, D. C.

SIR: We enclose herewith our check for \$20.00 in payment of the final fee in the matter of the application of Elias H. Henderson for United States Letters Patent for Improvement in Scaffold Supporting means, Case 2, filed June 19, 1909, Allowed April 5, 1910, Serial No. 503,053.

Respectfully,

BROWN & WILLIAMS.

Enclosure.

Serial No. 503,053.

C. V. Q.

Department of the Interior,

United States Patent Office.

Patent Will Issue May 17, 1910.

Washington, D. C., April 19, 1910.

Elias H. Henderson, c/o Brown and Williams, Chicago, Ills.

SIR: You are informed that the final fee of Twenty Dollars has been received in your application for Improvement in Scaffold supporting means.

Date of receipt April 18, 1910.

Very respectfully,

E. B. MOORE,
Commissioner of Patents.

Department of the Interior,
United States Patent Office.

Washington, D. C., April 22, 1910.

To the Commissioner of Patents:

The Commissioner is hereby requested to withdraw application Serial No. 503,053 of Elias H. Henderson from issue for the purposes of interference.

Very respectfully,

BALLARD N. MORRIS,
Examiner, Division 29.

Approved: Apr. 22, 1910.

F. A. TENNANT,
Assistant Commissioner.

Case withdrawn from files of Issue and Gazette Division Apr. 22/10 **(109)*. L. W. W. W. M. No interference found on full consideration.

B. N. MORRIS.

Apr. 25/10.

C. V. Q.

Department of the Interior,
United States Patent Office.

Washington, D. C., April 22, 1910.

Elias H. Henderson, c/o Brown and Williams, Chicago, Ills.

SIR: Your application for patent for an improvement in Scaffold supporting means, serial No. 503,053, allowed April 5, 1910, has been Withdrawn from the Issue Files of this office. The reasons therefor will be communicated to you by the Examiner.

Until a new notice of allowance is sent you the ^{Letters Patent} **(final fee)* will not be ^{issued.} **(required.)*

Very respectfully,

E. B. MOORE,
Commissioner of Patents.

*Matter in italics in parentheses, stricken out in original transcript.

#503,053.

C. V. Q.

Department of the Interior,
United States Patent Office.

Patent Will Issue May 24, 1910.

Washington, D. C., April 27, 1910.

Elias H. Henderson, c/o Brown and Williams, Chicago, Ills.

SIR: Your Application for patent for an Improvement in Scaffold supporting means, filed June 19, 1909, has been examined and Allowed.

The final fee, Twenty Dollars, having been received, the Letters Patent will be forwarded in due course of business.

Additional copies of Specifications and Drawings will be charged for at the following rates: Single copies, uncertified, 5 Cents Each. The money should accompany the order.

Very respectfully,

E. B. MOORE,
Commissioner of Patents.

1909.

Contents.

Print.

- | | | |
|-----|--------------------------|----------------|
| 1. | Application papers O. K. | |
| 2. | Rej. | Aug. 31, 1909 |
| 3. | Amend't A | Nov. 15, 1909 |
| 4. | Rej. | Dec. 14, 1909 |
| 5. | Amend't B | Mar. 7, 1910 |
| 6. | Letter of withdrawal | April 22, 1910 |
| 7. | | |
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| 17. | | |
| 18. | | |
| 19. | | |
| 20. | | |

Title:

Scaffold-Supporting Means.

3 Claims.

(Endorsed:) 205,170/15 O. W. E. K.

(Here follow diagrams marked pp. 241, 243 to 249, inclusive.)

241

20
921

503,053 391
2

959,008.

E. H. HENDERSON.
SCAFFOLD SUPPORTING MEANS.
APPLICATION FILED JUNE 19, 1908.

Patented May 24, 1910.

PERSPECTIVE-SHEET 1

Fig 1

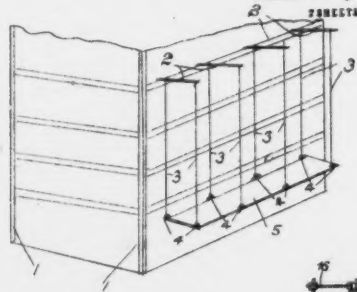


Fig 2.



Fig 3.

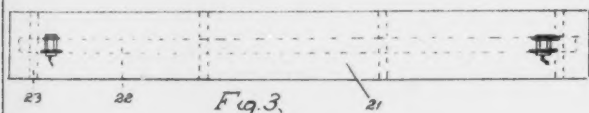
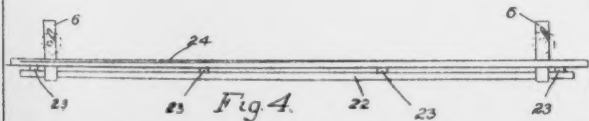


Fig 4.



7.261
New York Scaffolding Co.
v.
Chain Belt Co.
113

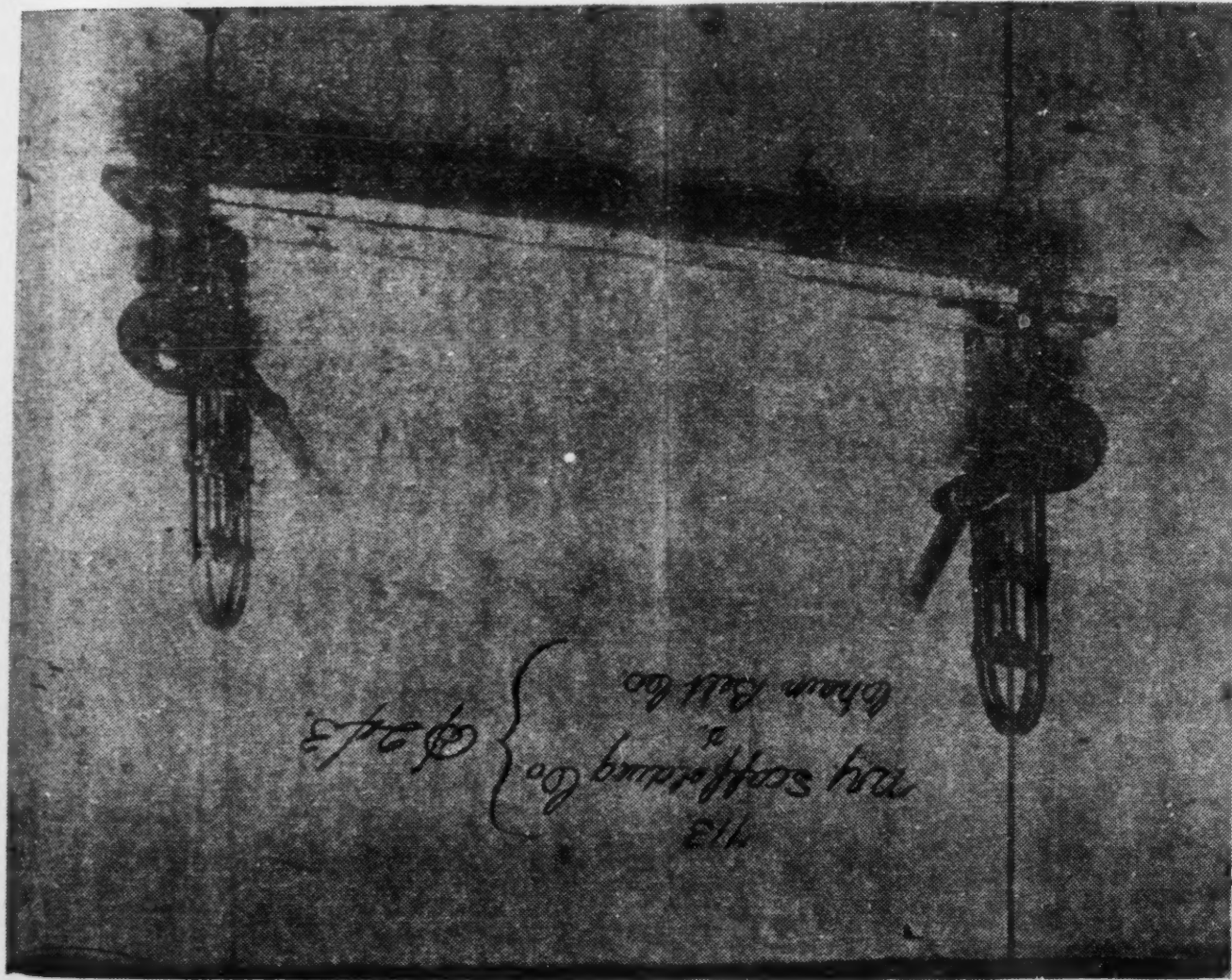
Witnesses

George C. Hughes
Albert E. McCall

By

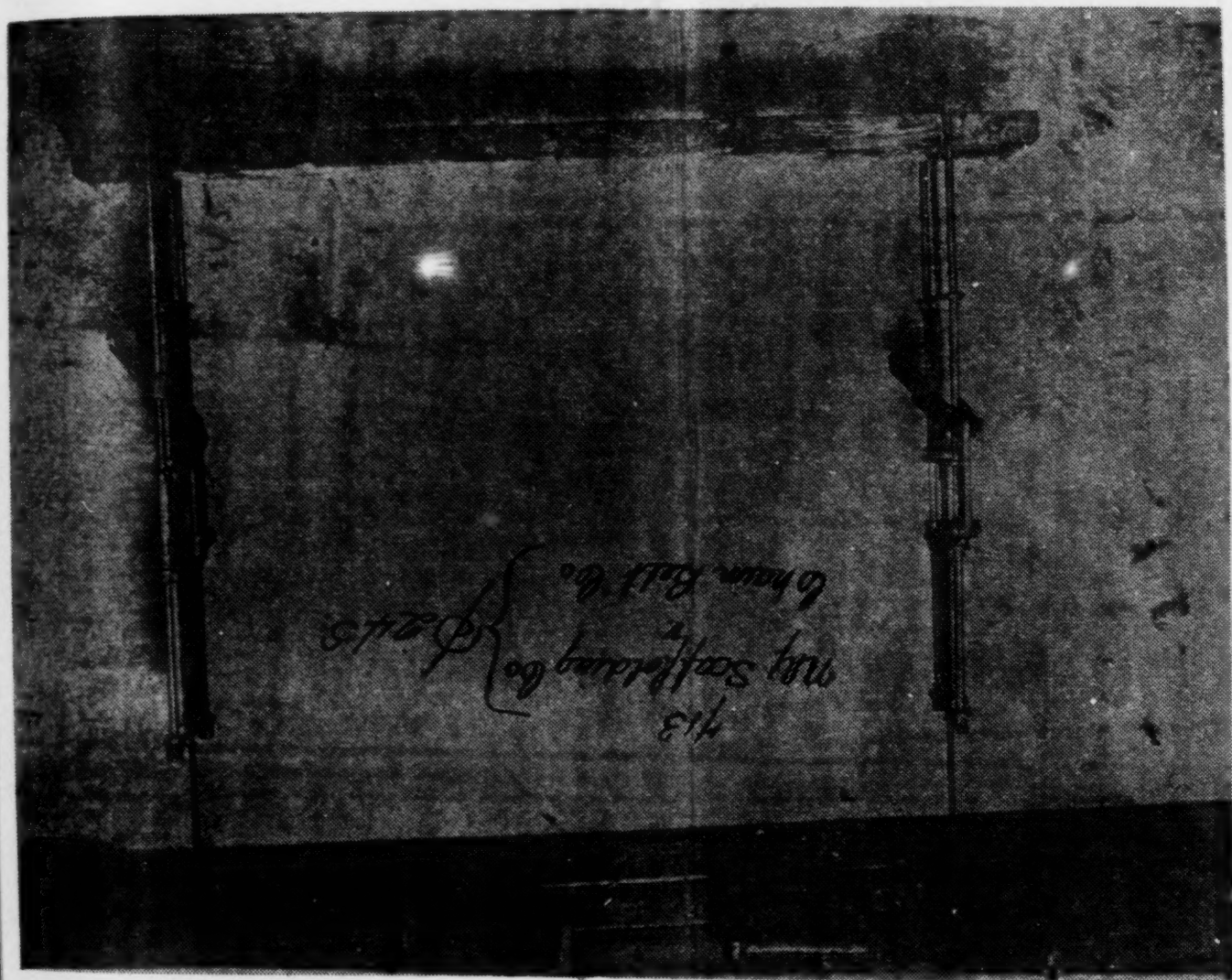
INVENTOR
Elias H. Henderson
Brown & Williams
ATTORNEYS

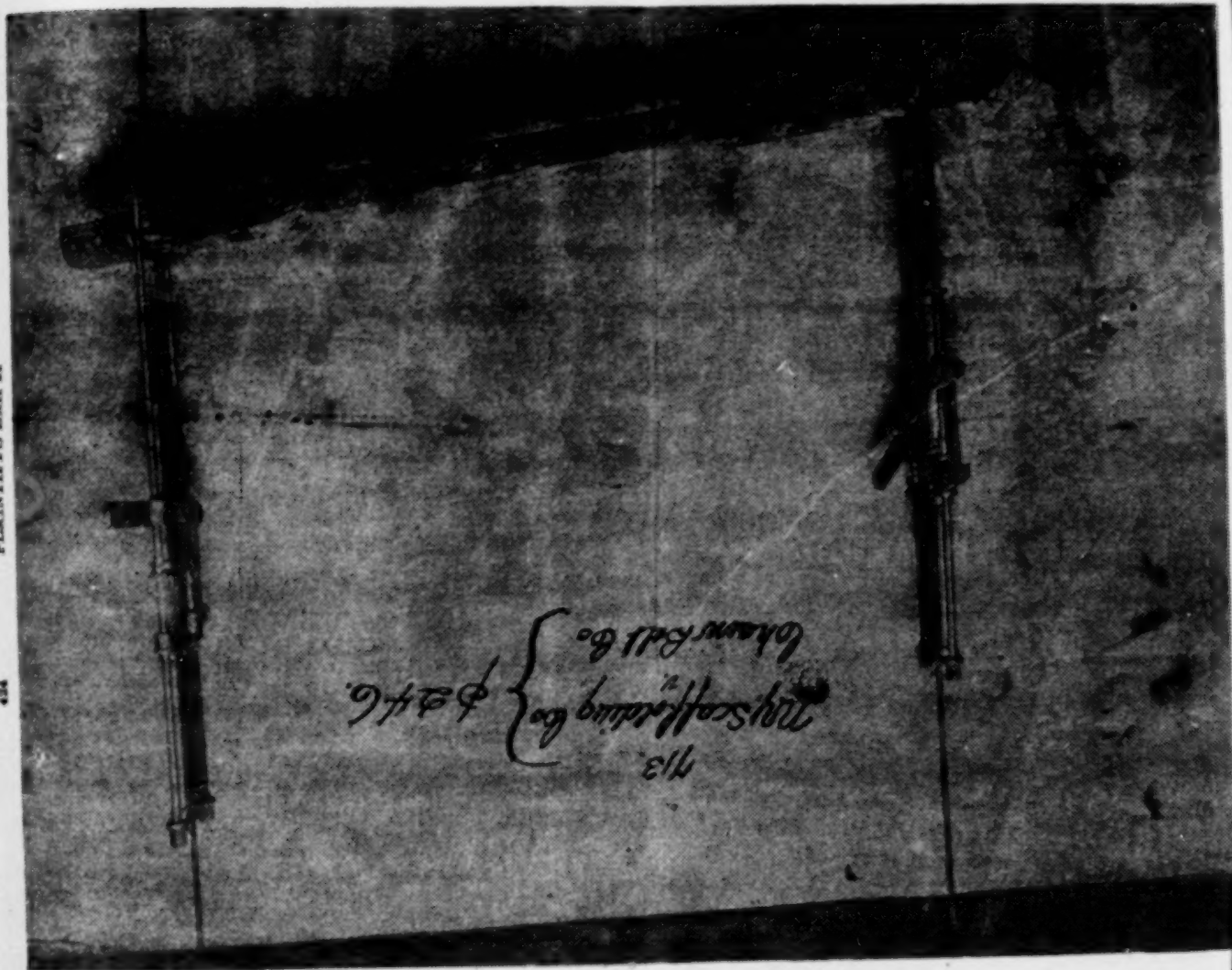
Accepted
April 25 1910



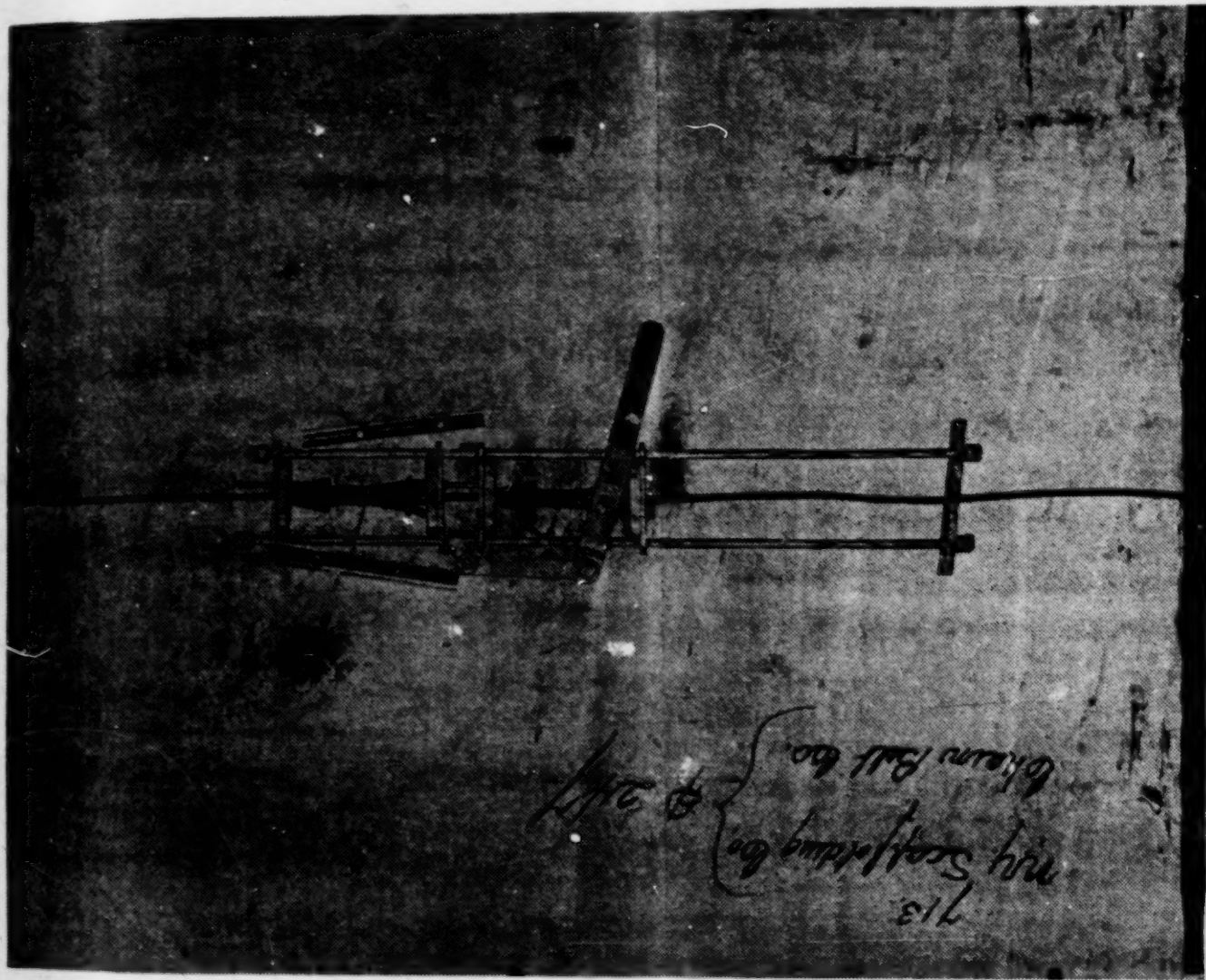


713
Mey. Scaffolding Co.
John Bull Co.
} ϕ 2 1/4





113
 Myself & Co }
 John Bell & Co }



7/13
may Scott/King Co.
William Ball Co.
@ 2/17

Shaw, 1000
1000

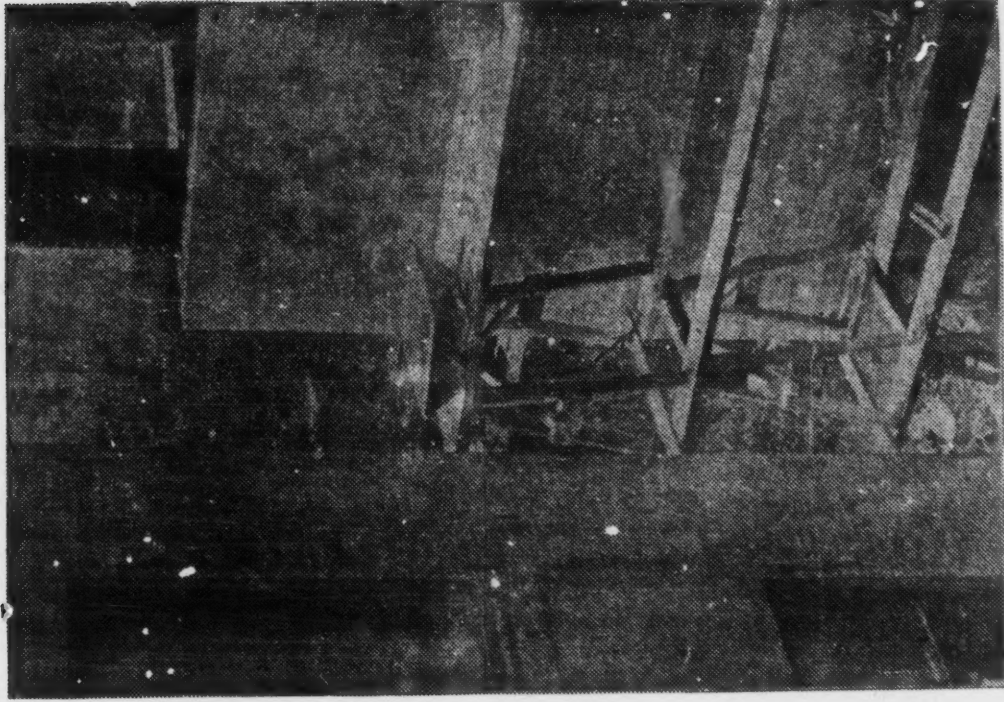


FIG. 1. GENERAL VIEW OF THE SCAFFOLD

713
My Scaffolding Co. }
Chas. Root Co. }
Q 249

250

PLAINTIFF'S EXH. No. 26.

File-wrapper and Contents of Whitney Patent No. 1,114,832.

United States of America,

Department of the Interior,

United States Patent Office.

To all to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the Records of this Office of the File Wrapper and Contents in the matter of the Letters Patent of Egbert Whitney, Number 1,114,832, Granted October 27, 1914, for Improvement in Hoisting-Machines.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington, this 1st day of May, in the year of our Lord one thousand nine hundred and sixteen and of the Independence of the United States of America the one hundred and fortieth.

[L. s.]

J. T. NEWTON,
Acting Commissioner of Patents.

Internal Rev. St. Canceled.

251

Div. 4.

Number (Series of 1909).

802,418

1913.

Patent No. 1,114,832.

(Ex'r's Book.) 297-19.
1987.

Name Egbert Whitney,

Of Omaha, County of —,

State of Nebraska.

Invention Hoisting Machines.

Original.

Renewed.

Petition	Nov. 18, 1913	, 191
Affidavit	" " , 1913	, 191
Specification	" " , 1913	, 191
Drawing	" " , 1913	, 191
Photo Copy	, 191	, 191
First Fee Cash \$15.,	Nov. 22, 1913	, 191
" " Cert.	, 191	, 191
Appl. filed complete	Nov. 22, 1913	, 191

Examined and passed for Issue Aug. 7, 1914 , 191

A. D. Merritt Exr. Div. 4 Exr. Div. , 191

Notice of Allowance Aug. 19, 1914 , 191

By Commissioner.

4 Final Fee Cash \$20

Sept. 28, 1914

" " Cert.

, 19

Patented October 27

Attorney Willard Eddy, 1530 City Nat'l B'k Bldg.

2 Omaha, Nebraska.

3 (No. of Claims Allowed 6) Title as Allowed Hoisting-Machines
(C1:57-15)(In left-hand margin:) Division of App., No.
, 191

252

Unclaimed Check Refused by Financial Clerk.

313.

\$15, Ck. Received Nov. 18, 1913. C. Chief Clerk U. S. Patent
Office.

Omaha, Nebr., November 15, 1913.

Ret'd Nov. 18/13.

Commissioner of Patents, Washington, D. C.

SIR: Herewith please find the complete application of Egbert
Whitney for a patent for *Moisting Machines*. This includes his
check to your order for the first fee.

Respectfully,

WILLARD EDDY.

Mail Room,
Nov. 18, 1913,
U. S. Patent Office.

802,418—1.

Appln.

Petition.

To the Commissioner of Patents:

The petition of Egbert Whitney, whose P. O. address is 1530
Vinton Street, Omaha, Nebr., a citizen of the United States residing
at Omaha, in the County of Douglas and State of Nebraska prays
that letters-patent may be granted to him for improvement in *Hoisting
Machines* as set forth in the annexed specification, and he hereby
appoint Willard Eddy, doing business at * (*Hartford, Connecticut*)
Omaha, Nebraska,

^ his attorney with full power of association, substitution and revoca-
tion, to prosecute this application, to make alterations and amend-

*Matter in italics in parentheses, stricken out in original transcript.

agents therein, to receive the patent, and transact all business in the Patent Office connected therewith.

Dated at Omaha, Nebr., November 15, 1913.

EGBERT WHITNEY.

Oath.

STATE OF NEBRASKA,

County of Douglas, ss:

Egbert Whitney the above-named petitioner, being duly sworn, deposes and says that he is a citizen of the United States, residing at Omaha, in the County of Douglas, and State of Nebraska; that he verily believes himself to be the original, first and sole inventor of the improvement in Hoisting Machines described and claimed in the foregoing specification; that he does not know and does not believe that the same was ever known or used prior to his invention thereof; or patented or described in any printed publication in the United States or any foreign country before his invention thereof or more than two year- prior to this application; or in public use or on sale in the United States for more than two year- prior to this application; and that no application for foreign patent has been filed by him or his legal representatives or assigns in any foreign country.

EGBERT WHITNEY.

Sworn to and subscribed before me, this 15th day of November, 1913.

[SEAL.]

I. S. LEAVITT,

Notary Public.

Mail Room,
Nov. 18, 1913,
U. S. Patent Office.

Specification.

To all whom it may concern:

Be it known that I, Egbert Whitney, a citizen of the United States, residing in the City of Omaha, County of Douglas, and State of Nebraska, have invented certain new and useful improvements in Hoisting-Machines, and have described the same in the following specification, illustrated by the accompanying drawings.

My invention relates to the class of hoisting machines which are commonly used in pairs suspended by cables at the side of a building in process of construction for the purpose of raising, lowering and supporting a platform for the accommodation of bricklayers and other workmen. A typical machine of this class is the subject of letters patent of the United States No. 988,270, which were issued to me July 18, 1911, for Improvements in Scaffolds. The principal objects of the invention are these, viz.: to simplify the construction, and reduce the number of parts and the

cost of manufacturing, of machines of this class; to make the machines compact, and to protect their clutch mechanisms from snow, ice, mortar, etc., and from personal interference; to avoid unnecessary friction; to hold the cables approximately straight constantly, and thereby avoid the work that would be involved in bending them around drums; to apply the operative power to the cables with maximum directness, and thereby to raise the given loads with minimum efforts to facilitate the operative engagement of the machines with the cables and also with the platforms; and in general to increase the efficiency of machines of this class.

To accomplish these objects I incorporate in my improved hoisting machine a pair of automatic clutches adapted to engage a suspending cable, means for holding the clutches constantly in vertical alinement and for carrying a load suspended therefrom, means for working the clutches repetitiously toward and from each other in such alinement upon the cable, and means for releasing the clutches severally.

In said drawings, illustrating the best manner in which I have contemplated applying the principles of the invention Fig. 1 is a side elevation of a hoisting machine which is constructed of iron and steel in accordance with these principles, and is applied to a suspending wire cable. Fig. 2 is a vertical axial section of a portion of Fig. 1, including the lower clutch. Fig. 3 is a horizontal section on the section line x—x of Fig. 2. Fig. 4 is a like section of the clutch casing on the section line y—y of Fig. 2. Fig. 5 is a perspective view of one of the clutch jaws. Fig. 6 is a perspective view of a portion of a pair of the clutch jaws. Fig. 7 is a detail.

In this illustrated and illustrative specimen of my invention, the two alining clutches are mounted respectively in the clutch boxes 1 and 2. Each of these boxes has a vertical peripheral split tubular wall, formed in duplicate wall sections 3 and 4, marginally contacting with each other, a cap 5 fitted over the top of the wall, and an inverted cap 6 fitted to the bottom of the same. These caps hold the contacting wall sections rigidly together, and have each a hole

through the middle for the accommodation of the steel wire cable 8, which is suspended from above. By these caps and their terminal perforations 9, the upper clutch box has a rigid engagement, and the lower clutch box a sliding engagement with the vertical side rods 10, occupying those perforations. The lower clutch box is movable vertically a short distance toward and from the upper clutch box on and between these rods by the spring hand lever 11, which works like a pump handle, on a pivot 12 projecting from that box, and is connected by the link 13 with the sliding bracket 14 fixed on one of those rods.

The clutch in each of these boxes comprises two duplicate vertically disposed semitubular jaws 15, mounted on the springs 16, and registering with each other face to face, being held in that position by the transverse guiding arms 17, working in the transverse slots 18 as the jaws approach and recede from each other. Being held, they are movable vertically in unison between the anti-friction rollers 19, on the rivets 20 extending horizontally through the box

These jaws have the internal riblike teeth 21 arranged in relatively staggered position in the two jaws respectively, to bite the cable; and external wedge-shaped projections 22 on the back of each jaw, to engage the rollers 19 and thereby to produce and to release the bite as the clutch rises and falls in the box. The key 24, is a removable pin longitudinally slidable by hand in the vertical hole 25 through the top of either cap 5 alternatively, and adapted by downward pressure to depress and thereby release the described clutches.

The transverse and removable cross plate 23, which is perforated to accommodate the cable 8 connects the side rode 10 at the bottom, and is intended to support the platform.

When undisturbed by manipulation, both clutches of the loaded machine grip the suspending cable; the lower clutch being actuated by the clutch springs, which force the wedging jaws upward and together between the rollers 19; and the upper clutch being additionally actuated by the downward pull of the platform or other load, communicated to those rollers through the side rods 10 and the upper clutch box, and forcing the jaws together. To raise the load, a workman first lifts the free end of the lever, thereby releasing and raising the lower clutch box, and then forces down the lever, thereby bringing the lower clutch into action and releasing and lifting the upper clutch from which the load is suspended. By thus raising and lowering the lever repetitiously, like a pump handle, he causes the machine to climb the cable with an inch worm movement, so to speak, and raises the platform to any desired level step by step. To lower the load, both clutches gripping as above described, the operator first releases the upper clutch with the key 24, then lets down the upper clutch box and the dependent load by raising the lever, then with the same key, transferred to the lower clutch box, while the upper clutch automatically grips the cable, he releases the lower clutch and then lowers the lower clutch box in the same manner, thereby placing the machine in posture for raising or lowering again in the same manner.

Constructed and operated as described, the machine accomplishes the above stated object of my invention in all its branches.

I claim:—

1. A hoisting machine of the specified class, comprising
a load-carrying frame

Per A. ing two self-acting clutches, **(means for)* \wedge holding the
vertical
" " clutches in \wedge alinement **(and for carrying a suspended load)*, and means for moving the clutches forward and from each other.

Sub. B¹.

2. A hoisting machine of the specified class, comprising two automatic clutches adapted to engage a suspending cable, means for holding the clutches constantly in vertical alinement and for carry-

*Matter in italics in parentheses, stricken out in original transcript.

ing a load suspended therefrom, means for moving the clutches towards and from each other in such alinement, and means for releasing the clutches severally.

3. A hoisting machine of the specified class, comprising two automatic clutches, means for holding the clutches in vertical alinement and for carrying a suspended load, means for moving the clutches toward and from each other in such alinement, and means for releasing the clutches severally; each clutch having two co-acting spring-mounted, vertical wedge jaws between anti-friction rollers, and being adapted to grip automatically a suspending cable and to be released from that cable.

4. A hoisting machine of the specified class, comprising two clutches adapted to grip a cable automatically, two clutch boxes

holding the clutch ^{es} \wedge respectively, two vertical rods having a rigid connection with one of the clutch boxes and a sliding engagement with the other, and holding the clutch boxes and contained clutches constantly in a vertical alinement at a changeable distance apart, a cross connection between the rods for the support of the load, means for sliding one of the clutch boxes toward and from the other on the vertical rods, and means for releasing the clutches severally.

5. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip a suspending cable, means for holding the clutches constantly in vertical alinement and for carrying the load suspended therefrom, means for releasing the clutches severally and a link and lever connection between the clutches for moving them toward and from each other.

6. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip a suspending cable, separate boxes enclosing the clutches respectively, means for holding the clutch boxes in vertical alinement at varying distances apart and for carrying a load, means for reciprocating the clutch boxes, and a key adaptable in a hole in each box for releasing the contained clutch.

In testimony whereof, I subscribe my name hereto in the presence of two witnesses.

EGBERT WHITNEY.

Witnesses:

WILLARD EDDY.

I. S. LEAVITT.

—313.

Omaha, Nebr., November 15, 1913.

* (15), Ck., Received Nov. 18, 1913. Chief Clerk U. S. Patent Office.

Commissioner of Patents, Washington, D. C.

SIR: Herewith please find the complete application of Egbert Whitney for a patent for Hoisting Machines. This includes his check to your order for the first fee.

Respectfully,

WILLARD EDDY.

(Typewritten across face:) Uncertified check refused by Financial Clerk. Ret'd Nov. 18/13.

Letter No. —.

Department of the Interior,

United States Patent Office,

Washington.

N. B. J. 15, Ck., Received Nov. 22, 1913. J. Chief Clerk U. S. Patent Office.

November 18, 1913.

Mr. Willard Eddy, 1530 City Natl. Bank Bldg., Omaha, Nebr.

SIR: Your check for \$15.00 received this day in payment for filing the application for patent of Egbert Whitney is herewith returned for certification as required by Rule 206 of the Rules of Practice, which provides that—

"All payments of money required for office fees must be made in specie, Treasury notes, national bank notes, certificates of deposit, money orders or certified checks, payable to the Commissioner of Patents."

Please return this letter with check.

Postage stamps not accepted. Cash should be registered; if sent by ordinary mail, at risk of sender.

Very respectfully,

W. F. WOOLARD.

Chief Clerk.

Enclosure.

(500-4-13.)

*Matter in italics in parentheses, stricken out in original transcript.

259

Department of the Interior,
United States Patent Office.

Washington, March 27, 1914.
Mailed " " "

Willard Eddy, 1530 City Natl. Bank Bldg., Omaha, Nebraska:

Please find below a communication from the E-aminer in charge of the application of Egbert Whitney; filed Nov. 22, 1913; Hoisting Machines. 802,418.

THOMAS EWING,
Commissioner of Patents.

Claim 1 is rejected as being readable upon
Allego, 911,638, Feb. 9, 1909, (57-98).

The remaining claims are deemed to be allowable.

The following references are cited as further showing the state of the art:—

Petrie, 526,163, Sept. 18, 1894, (114-51).

Killgore, 588,277, Aug. 17, 1897, (212-5).

A. D. MERRITT,
Examiner.

WALL.

Omaha, Nebr., June 18, 1914.

Mail Room,
Jun- 20, 1914,
U. S. Patent Office.

U. S. Patent Office,
Jun- 22, 1914,
Division IV.

Paper No. 3.

Amendment A.

In the United States Patent Office.

Div. 4, Room 234.

Application #802,418. Filed Nov. 22, 1913, by Egbert Whitney,
Hoisting Machines.

Applicant's Response to Paper No. 2, Dated March 27, 1914.

Commissioner of Patents.

SIR: Please cancel from Claim 1 "means for holding the clutches in alinement and for carrying a suspended load; "and in place thereof insert a load-carrying frame holding the clutches in vertical alinement.

Re-examination is requested.

Respectfully,

WILLARD EDDY.

Department of Interior,
United States Patent Office.

Washington, July 10, 1914.
Mailed " " "

illard Eddy, 1530 City Nat'l B'k Bldg., Omaha, Nebraska:

Please find below a communication from the Examiner in charge
the application of Egbert Whitney, filed Nov. 22, 1913; Hoisting
machines. 802,418.

THOMAS EWING,
Commissioner of Patents.

Responsive to amendment of June 20, 1914.
Claim 1 is readable directly upon Allego or Petrie and is therefore
rejected. There is nothing at all distinctive in the phrase "load-
carrying".

A. D. MERRITT,
Examiner.

WALL.

Mail Room,
July 20, 1914,
U. S. Patent Office.

U. S. Patent Office,
Jul- 21, 1914,
Division IV.

Omaha, Nebr., July 17, 1914.

Paper No. 5.

Amendment B.

In the United States Patent Office.

Div. 4, Room 234.

Application No. 802,418. Filed Nov. 22, 1913, by Egbert Whitney.
Hoisting Machines.

Applicant's Response to Paper No. 4, Dated July 10, 1914.

Commissioner of Patents.

SIR: Claim 1 is hereby amended so as to read as follows, viz.

- B. 1. A hoisting machine of the specified class, com-
prising two automatic clutches adapted to grip alter-
natively a suspending cable, means for raising
261 and lowering the clutches independently on the
cable, and a suspended frame, upheld by the

Per C. *(*gripping* clutch) ^{es} ^ alternatively and provided with means for *(*and*) holding both the clutches in vertical alinement.

Respectfully,

WILLARD EDDY.

REMARK: It is obvious that the above claim cannot be read upon the references cited, and that Petrie has no corresponding means for paying out his cable 6.

Department of the Interior,
United States Patent Office.

Washington, July 24, 1914.
Mailed " " "

Willard Eddy, 1530 City Nat'l Bk. Bldg., Omaha, Nebraska:

Please find below communication from the Examiner in charge of the application of Egbert Whitney, for Hoisting Machines, filed Nov. 22, 1913, Ser. No. 802,418.

THOMAS EWING,
Commissioner of Patents.

Considered as amended July 20, 1914.

"Gripping clutch" in line 4 of claim 1 is ambiguous since two gripping clutches have been previously mentioned. The last line of this claim is also objectionable for the reason that not enough structure is specified to support the function described. The following amendments are suggested to remove these objections. Insert "one of after "by" in line 4, and change "Clutch" to clutches. Line 5, insert provided with means for before holding.

A. D. MERRITT,
Examiner.

WALL.

*Matter in italics in parentheses, stricken out in original transcript.

Div. 2, Paper No. 7.

Amendment C.

Filed Jul- 30, 1914.

Omaha, Nebr., July 27, 1914.

Mail Room,
Jul- 29, 1914,
U. S. Patent Office.

U. S. Patent Office,
Jul- 31, 1914,
Division IV.

Application No. 802,418. Filed Nov. 22, 1913, by Egbert Whitney.
Hoisting Machines.

Applicant's Response to Paper No. 6, Dated July 24, 1914.

Commissioner of Patents.

SIR: From line 4 of claim 1 erase "gripping clutch, and," and substitute therefor clutches alternatively, and provided with means for. Re-examination is requested.

Respectfully,

WILLARD EDDY.

REMARK: The suspended frame is always upheld by the acting or gripping clutch only.

Department of the Interior,
United States Patent Office.

Washington, Aug. 19, 1914.

Egbert Whitney.

SIR: Your Application for a patent for an Improvement in Hoisting Machines, filed Nov. 22, 1913, has been examined and Allowed.

The final fee, Twenty Dollars, must be paid not later than Six months from the date of this present notice of allowance. If the final fee be not paid within that period, the patent on this application will be withheld, unless renewed with an additional fee of \$15, under the provisions of section 4897. Revised Statutes.

The office delivers patents upon the day of their date, and on which their terms begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

263 When you send the final fee you will also send Distinctly and Plainly Written, the name of the Inventor, Title of Invention, and Serial Number as Above Given, Date of Allowance

(which is the date of this circular), Date of Filing, and, if assigned, the Names of the Assignees.

If you desire to have the patent issue to Assignees, an assignment containing a Request to that effect, together with the Fee for recording the same, must be filed in this office on or before the date of the payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of Five Cents Each. The money should accompany the order. Postage stamps will not be received.

Final fees will Not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,

THOMAS EWING,
Commissioner of Patents.

Willard Eddy, Citizens National Bank Bldg., Omaha, Nebraska.

(In left-hand margin:) In Remitting the Final Fee Give the Serial Number at the Head of this Notice.

(In right-hand margin:) Uncertified Checks Will not be Accepted.

(In right-hand margin:) Uncertified Checks Will Not Be Accepted.

\$20, Dft., Received Sep. 28, 1914. Chief Clerk U. S. Patent Office.

J.

Omaha, Nebr., September 25, 1914.

Commissioner of Patents, Washington, D. C.

SIR: Herewith please find a Cashier's draft for twenty dollars in payment of the final fee in application No. 802,412, which was filed November 22, 1913, by Egbert Whitney, for a patent for Hoisting Machines, and was allowed August 19, 1914. This draft, payable to your order, is identified by the above number of this application endorsed thereon.

Respectfully,

WILLARD EDDY.

264 Mail Room,
Oct. 17, 1914,
U. S. Patent Office.

Omaha, Nebr., October 15, 1914.

Application No. 802,418. Filed Nov. 22, 1913, by Egbert Whitney. For Hoisting Machine. Allowed August 19, 1914. To Issue Oct. 27, 1914.

Commissioner of Patents, Washington, D. C.

SIR: I beg that this patent may be mailed to me in strict accordance with Rule 169, even if the applicant should otherwise request

or has otherwise requested. This because I think that the possession of the document by me will facilitate the collection of my just account from the patentee.

Respectfully,

WILLARD EDDY.

Mail Room,
Oct. 2, 1914,
U. S. Patent Office.

Omaha, Nebr., Sept. 30, 1914.

To the Commissioner of Patents, Washington, D. C.

DEAR SIR: The final government fee of \$20.00 was mailed you on Sept. 24th for the issuing of patent the Cerial or application Number is 802,418.

When this Patent is issued will you kindly mail it direct to the Patentee, and oblige.

Yours truly,

E. WHITNEY,
Patentee.

3228 So. 23rd Street.

October 19, 1914.

Mr. Egbert Whitney, 3228 So. 23rd Street, Omaha, Nebr.

SIR: Referring to your communication of the 30th ultimo, in re your application Serial No. 802,418, for Hoisting Machines, you are advised that Letters Patent will issue thereon October 27, 1914, and will be sent in accordance with the rules of this Office to the attorney of record, Mr. Willard Eddy, City National Bank Bldg., Omaha, Nebraska.

Respectfully,

Chief Clerk.

2—421.

1913.

Contents.

1. Application Papers.
2. Rejection, Mar. 27, 1914.
3. Amendment A, Jun- 20, 1914.
4. Rejection, Jul- 10, 1914.
5. Amendment B, Jul- 20, 1914.
6. Letter Jul- 24, 1914.
7. Amendment C, Jul- 29, 1914.

Patent Office printed copy of Patent No. 1,114,832, attached hereto, being the same as plaintiff's exhibit 7.

PLFF.'S EXH. 27.

File-wrapper and Contents of Whitney Patent No. 998,270.

2—390.

United States of America,
Department of the Interior,
United States Patent Office.

To all to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the Records of this Office of the File Wrapper and Contents in the matter of the Letters Patent of Robert Whitney, Number 998,270, Granted July 18, 1911, for Improvement in Scaffold.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington, this 1st day of May, in the year of our Lord one thousand nine — and sixteen and of the Independence of the United States of America the one hundred and fortieth.

(Signed)

[L. s.]

J. F. NEWTON,
Acting Commissioner of Patents.

Canceled 10c. Int. Rev. Stamp.

Plaintiff's Exh. No. 27.

266

2—437.

#2227—R.

Div. 29.

Number (Series of 1900).

605,338.

1911.

(Ex'r's Book.) 258—1.

Patent No. 998,270.

Name Egbert Whitney,
Of Omaha,
County of ———,
State of Nebraska.
Invention Scaffold.

Original.

Renewed.

Petition	January 28, 1911	, 191
Affidavit	" " , 1911	, 191
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Drawing 2 sheets	" " , 1911	, 191
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" " Cert.	, 191	, 191
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Examined B. N. Morris	April 28, 1911,	
Allowed W. W. Mortimer		
For Commissioner.	For Commissioner.	
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Patented	July , 18	, 1911
Associate Attorney	Attorney	
Willard Eddy,	1530 City Nat'l Bank Bldg.,	
2	Omaha, Neb.	
(No. of Claims Allowed 10.)	Title as Allowed Scaffold.	
3		
(In left-hand margin:) Division of App., No.		, filed
, 191		

267

Serial No. 605,338, Paper No. 1.

Application.

\$15, Received Jan. 28, 1911. J. Chief Clerk U. S. Patent Office.

N. V. P.

227—R.

Petition.

To the Commissioner of Patents:

Your petitioner, Egbert Whitney, citizen of the United States, residing at Omaha, in the County of Douglas, and State of Nebraska, P. O. Address #2615 Dodge Street, Omaha, Nebraska, prays that Letters Patent may be granted to him for improvements in Scaffold, set forth in the annexed Specification.

And he hereby appoints the firm of R. S. & A. B. Lacey, of Washington, D. C., R. S. Lacey and A. B. Lacey constituting said firm (Registration No. 496), his attorneys with full power of substitution and revocation, to prosecute this application, to make alterations and

amendments therein, to sign the drawings, to receive the Letters Patent, and to transact all business in the United States Patent Office connected therewith.

Signed at Omaha, in the County of Douglas and State of Nebraska this 24th day of January, 1911.

EGBERT WHITNEY. [SEAL.]

Specification.

To all whom it may concern:

Be it known, that I, Egbert Whitney, citizen of the United States, residing at Omaha, in the County of Douglas, and State of Nebraska, have invented certain new and useful improvements in Scaffold, of which the following is a specification.

J. J. M./M. G.

This invention relates to an improved scaffold for use in the erection of buildings of stone, brick, cement and the like, and especially to that class of buildings which are known as steel or reinforced buildings wherein it is the custom to form the outer walls from an outside scaffold.

Heretofore it has been the custom to erect temporary scaffolds upon timbers projected from windows or other orifices through the walls of the building, or to hang temporary scaffolds from depending members supported upon the upper edge of the frame or walls being constructed. This class of scaffold necessitates the knocking down of the same and the re-erection of the scaffold every five or six feet of the entire height of the wall during its erection. Scaffolds have also been used which employ drums about which are wound cables depending from an overhanging beam supported at the top of the steel frame of the building. In raising the scaffold the cable is wound about the drum taking up considerable space as it nears the top of the building and increasing the size of the drum, the latter necessitating a corresponding increase in the power for turning the drum when raising a given load.

An object of this invention is to provide a scaffold which overcomes the above objections and which may be raised or lowered against the wall being erected or the steel frame of the building.

The invention contemplates a scaffold which is hung upon a pair of outwardly projecting timbers disposed upon the top of the frame of the building by means of cables which extend down from the timbers towards the ground. The scaffold is provided with an improved mechanism through which the cables pass in order to raise or lower the scaffold.

The improved scaffold is further provided with a double check or braking mechanism engaging with the cable to insure the safety of the workman when operating the scaffold and while working upon the wall.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a detail perspective view of the improved scaffold as applied to the outer wall of a building;

Fig. 2 is a front elevation of one of the hoisting frames detached from the scaffold;

Fig 3 is an edge view of the same;

Fig. 4 is a section on the line 4-4 looking in the direction of the arrows;

Fig. 5 is a transverse section on the line 5-5 of Fig. 2;

Fig. 6 is an inner face view of one of the clutches employed;

Fig. 7 is a side elevation of the same; and,

Fig. 8 is an end view of the brake shoe employed in connection with the drum.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings, particularly to Fig 1, the improved scaffold is disclosed as being hung against a building 10. A pair of supporting beams 11 are secured upon the top of the building 10 and have their outer ends projecting beyond the side thereof to carry depending cables 12 upon which the scaffold is supported.

The scaffold is formed with a supporting frame at each corner thereof receiving the adjacent depending cable 12, and being provided with novel means hereinafter set forth, for moving the frame upon the cable to vertically adjust the scaffold. The supporting frames are of like structure, each one of which comprises a pair of companion bars 13 and 14 curved edgewise into inverted U-form. The bars 13 and 14 are spaced apart at their upper closed ends by transversely spaced rollers 15 supported upon rivets 16 passing transversely through the bars and being headed against the outer faces thereof. The cable 12 passes down between the bars 13 and 14, and between the rollers 15 which center the cable in the upper end of the frame. The lower ends of the bars 13 are curved back and up providing loops 17, the upper ends of which rest against the inner faces of the lower ends of the bar 14. Rivets 18 pass through the lower ends of the bar 14, the upturned ends of the loops 17, and the bar 13 to bind the same together, the bars being spaced apart by sleeves 19 carried about the

Per A. rivets ¹⁸*(17.) A supporting rod 20 is fitted at its ends in the loops 17, and is headed at its extremities to engage

*Matter in italics in parentheses, stricken out in original transcript.

against the outer edge of the loops 17 to hold the rod from longitudinal displacement.

The upper end of the frame is provided with a pair of companion cross braces 21 secured at their ends across the outer faces of the bars 13 and 14 by rivets 22 passing through the same. Upper links 23 are hinged at their outer ends between the bars 13 and 14 upon the rivets 22, the links 23 being disposed in pairs and being spaced apart by collars 24 carried upon the rivets 22. Lower companion braces 25 are secured across the opposite sides of the main frame by transverse rivets 26 passing through the braces 25 and the bars 13 and 14. Lower links 27 are hinged at their outer ends between the bars 13 and 14 upon the rivets 26, the links 27 being disposed in pairs and being spaced apart by collars 28 carried upon the rivets 26. A pair of vertical clutch members 29 are carried upon the inner ends of the links 23 and 27 and are formed with longitudinal grooves 30 in their inner opposite faces, and are provided with outwardly extending ears 31 adjacent to their opposite ends fitting between each pair of the links 23 and 27. Pins 32 pivotally connect the ears 31 to the links so as to effect the parallel movement of the clutch members 29. Each of the clutch members 29 is provided with a lateral guide 33, the same being disposed at the opposite sides of the clutches, for engagement in a registering transverse groove 34 formed in the opposite side of the opposite clutch and adapted to hold the clutches in registration with one another.

Transverse pins 35 are carried between the bars 13 and 14 and support the outer ends of a pair of leaf springs 36 which are turned up at their ends to engage above the pins 35 to prevent the displacement of the springs 36. The springs 36 extend in toward the clutch members 29 and pass over stops 37 carried across the upper braces 21. Lips 38 project outwardly from the clutch members 29 above the upper ears 31 and form shoulders for the reception of the inner ends of the leaf springs 36 to hold the clutch members 29 normally up.

The frame is provided midway of its ends, and against the bar 13, with a pair of transversely registering brackets 39 held thereon by bolts 40. The bolts 40 pass through the bars 13 and 14 and carry therebetween spacing sleeves 41 to insure the rigidity of the brackets 39 upon the frame. The drum 42 is carried by the frame and has its trunnions journaled in the outer ends of the brackets 39, and receives thereover the

271 cable 12. **(The brackets 39 are of a length to maintain in position the drum 42 that the cable 12 passes over the same.)*

*Matter in italics in parentheses, stricken out in original transcript.

Sub. A'. *in a straight line down from the clutches 29 to the drum, thus preventing the binding of the cable 12 against the lower ends of the clutches 29 when released.*) As is dis-

closed in Figs. 2 and 4, the cable 12 is wound about the drum with but four complete turns when it passes down and out of one side of the frame. To insure the gripping of the cable 12 about the drum 42, a friction roller 43 is employed, the same engaging adjustably against the periphery of the drum 42 and provided with a series of grooves 44 snugly receiving the convolutions of the cable. The roller 43 is journaled in brackets 45 which are secured at their lower ends against the outer face of the bar 14 by the lower bolts 40, and are held against the bar 14 at their upper ends by short bolts 46. The brackets 45 are slotted longitudinally at their ends to receive the bolts 40 and 46 and to admit of the adjustment of the brackets 45 longitudinally upon the frame to move the roller 43 toward and from the drum 42.

One end of the drum 42 is provided with a fixed
47

Per B. ratchet \wedge , by means of which the drum is actuated. The drum 42 carries a segment 48 upon one of its trunnions, as at 49, against the outer side of the ratchet 47, the segment 48 having an offset web 50 overhanging the ratchet 47. A supporting arm 51 projects up from the inner edge of the web 50 and hingedly supports a hand lever 52. The arm 51 is provided midway of its ends, and at its inner edge, with a projection 53 formed with a longitudinal slot 54 in which is adjustably positioned a stop-bolt 55. The stop-bolt 55 projects into the path of the lever 52 and engages therewith when the lever 52 is swung out from the frame, and is employed for the purpose of communicating the movement of the lever 52 to the segment 48 when it is desired to swing the segment out from the frame.

The web 50 is relatively narrow to accommodate pawls 56 and 57 hinged upon pins 58 carried through the lower corners of the arm 51 and the upper corners of the segment 48. A leaf spring 59 is secured midway of its ends by a screw 60 upon the web 50 and has its opposite extremities resting against the pawls 56 and 57. The pawls 56 and 57 are provided with shoulders 61 determining flat faces arranged at angles upon the pawls and against which the ends of the spring 59 rest when the pawls are turned into or out of operation. The pawl 56 carries an outwardly projecting lug 62 by means of which the pawl is raised out of engagement with the ratchet 47.

The hand lever 52 is hinged adjacent to its lower end upon the upper extremity of the arm 51 by a rivet 63. The lower end of the hand lever 52 terminates a short distance above the drum 42 and pivotally carries upon its lower end a brake shoe 64. As is disclosed

to advantage in Fig. 8, the shoe 64 is of arcuate form and is provided with a semicircular groove in its lower face to receive and bind against the adjacent lap of the cable 12. The shoe 64 is

provided with spaced upstanding lugs 65 receiving there between the lower end of the hand lever 52. The lugs 65 are hinged upon the lever 52 by a rivet or pin 66. The lugs 65 are of such length that when the lever 52 is swung up against the adjacent bar 13 of the frame, the shoe 64 binds tightly against the cable 12 and holds the cable and the drum from movement. The bar 13 carries a hook 67 mounted upon a swivel-eye 68 carried upon the bar 13 in registration with the hand lever 42. The hook 67 is adapted to engage and hold the lever against the frame in a locked position.

In the erection of the scaffold the above described frames are arranged in pairs, the frames facing one another so as to dispose the hand levers 52 convenient to the hand of the operators, as shown in Fig. 1. End beams 69, of considerable thickness, are positioned across the supporting rods 20 of each pair of frames. The floor body of the scaffold comprises a number of longitudinal beams arranged longitudinally across the end beams 69 upon which the frames are supported.

In raising the scaffold the levers 52 are released from the hooks 67 and swung out from the frames. This movement of each of the levers raises the adjacent brake shoe 64 from the cable 12 and draws the segment 48 around to move the pawls 56 and 57 over the teeth of the ratchet 47. In moving the segment 48 the lower end of the

hand lever 52 strikes the stop-bolt 55 and limits the outward swinging of the hand lever 52 about the pin 66. The weight of the scaffold now draws the frame down and permits the leaf springs 36 to raise the clutches 29 and bind the same against the sides of the cable 12. This holds the frame from moving down about the cable 12. The hand lever 52 is now moved in toward the frame, the same swinging about the pin 63 and binding the shoe 64 against the cable 12 and the drum 42. At the same time the segment 48 is carried with the lever 52, by reason of its binding against the drum 42, and the pawls 56 and 57 engage with the teeth of the ratchet 47 to insure the turning of the drum 42. The cable is moved over the drum 42 during its rotation to draw the cable down between the clutches 29 and feed the cable out through the lower end of the frame. By reason of the spring action of the clutches 29 the cable can be drawn down between the clutches and cannot be moved up therebetween until the clutches are held down by hand. The operation of the lever 52 is repeated whereby the drum is turned a fraction of a revolution at each inward movement of the lever 52.

In lowering the scaffold the clutches 29 are drawn down against the tension of the spring 30 and held away from the sides of the cable 12 while the hand lever 52 is moved out from the frame a slight distance to ease up the pressure of the brake shoe 64 against the cable and the drum. When the frame is being lowered the pawls 56 and 57 are raised out of the path of the teeth of the ratchet

7, the same being held in such position by the spring 59 engaging against the opposite flattened faces of the pawls, for the purpose of freeing the drum and allowing it to rotate backwardly beneath the web 50.

From this construction and arrangement it is seen that this scaffold adjusting device is adapted for use in connection with very high buildings wherein a large amount of cable cannot be conveniently carried, and wherein it is not necessary to knock down and reconstruct the scaffold at each elevation of the same.

Having thus described the invention, what is claimed is:

* (—1—

A scaffold including overhanging beams carried upon the top of a building, cables depending from the beams, adjusting frames disposed about the cables for vertical adjustment thereon, and a flooring carried by the frames.

Canceled
Per A.

—2—

A scaffold including a vertically disposed cable, a frame engaging about the cable, a drum carried in the frame and having the cable wound thereabout, a clutch formed in the upper end of the frame for engagement with the cable, and operating means carried by the frame and having connection with the drum for rotating the same.)

1. * (—3—)

Per A. ^{including} A scaffold ^{including} **(having)* a supporting frame, a vertical cable passing through the frame, a drum rotatable disposed in the frame, said cable being wound about the drum and depending therefrom, a segment pivoted concentric to the drum upon the frame, an arm carried by the segment and being offset over the drum, a hand lever hinged upon the arm, a brake shoe pivoted upon the lower end of the hand lever and engaging against the periphery of the drum to bind the cable thereagainst, a ratchet fixed upon one end of the drum, pawls carried by the segment for engagement with the ratchet to rotate the drum, and a stop carried by the arm for limiting ^{and} the movement of the lever ^{and} communicating its movement to the segment.

* (—4—

Canceled
Per A.

A scaffold including a corner frame, a supporting cable for the frame, co-operating clutch members carried in the upper end of the frame for engagement with the cable, a drum mounted upon the frame to receive the cable thereover, a lever carried upon the frame for rotating the drum to raise the frame, and a brake shoe carried upon the lever binding against the drum to regulate the downward movement of the frame about the cable.

—5—

A scaffold including a vertically disposed cable, a frame engaging over the cable, means disposed upon the frame for moving the frame over the cable, and
275 a brake carried by the frame engaging the cable to regulate the downward movement of the frame thereover.

—6—

A scaffold including a frame, a cable passing vertically through the frame for supporting the same, a feeding mechanism arranged in the frame and engaging with the cable to raise the frame thereover, a clutch disposed in the frame and engaging with the cable to hold the frame from downward movement, and a brake carried by the frame engaging with the cable to control the downward movement of the frame about the cable.

—7—

A scaffold including a corner frame, a cable passing through the corner frame, a drum journaled in the frame and receiving the cable thereover, a lever pivoted in the frame and engaging with the drum for rotating the same, a brake shoe carried by the lever for binding against the cable and the drum when rotating the same, and a clutch mechanism carried in the upper end of the frame to hold the cable from movement through the frame when released by the lever.

—8—

A scaffold including a frame, a cable depending through the frame, clutch members located in the upper end of the frame to bind the cable from movement there-

*Matter in italics in parentheses, stricken out in original transcript.

through, a drum journaled in the frame below the clutch members for receiving the cable, and operating means carried by the frame for engagement with the drum to move the cable thereover.

2. —9—

Canceled
Per B. A scaffold including a frame, a cable depending through the frame, a drum journaled in the frame and receiving the intermediate portion of the cable thereabout, a clutch carried by the frame to engage with the cable and hold the frame from moving down thereabout, and an operating lever pivoted in the frame and having connection with the drum for intermittently rotating the same.

276

—10—

Canceled
Per A. A scaffold including a corner frame, a cable depending through the frame, an operating lever carried by the frame for engagement with the cable to hold the same from movement through the frame, a drum journaled in the frame and having the cable wound thereabout, a rotating means carried by the lever and having connection with the drum for revolving the same.)

2. *(3 —11—)

A scaffold including a frame, a cable depending through the frame, a drum mounted upon the frame and receiving the cable thereabout, and an operating lever hinged in the frame and having connection with the drum for rotating the same, said operating lever carrying braking means to regulate the passage of the cable through the frame.

* (—12—

A scaffold including a frame, a cable depending through the frame, a clutch carried by the frame and engaging with the cable to support the frame thereon, and a controlling mechanism carried in the frame for regulating the movement of the cable through the frame.

—13—

Canceled
Per A. A scaffold including a frame, a cable depending through the frame, a clutch carried by the frame for

*Matter in italics in parentheses, stricken out in original transcript.

engagement with the cable to hold the frame from dropping, a drum journaled in the frame and receiving the cable thereabout, operating means carried by the frame for rotating the drum, and braking means carried by the frame for controlling the movement of the cable through the frame when released.

—14—

A scaffold including a frame, a cable depending through the frame, and a rotating drum journaled in the frame and receiving the cable to move ^{the} drum thereover.)

277

3. *(4 —15—)

A scaffold including a vertical cable, a frame engaging about the cable for vertical adjustment, a drum carried by the frame and receiving the cable, operating means carried by the frame for revolving the drum to raise the frame about the cable, and a braking mechanism carried by the frame and having connection in the operating mechanism for controlling the movement of the cable through the frame.

* (—16—

A scaffold including a vertical frame, a depending cable engaging through the frame, clutch members carried in the upper end of the frame for engagement with the cable to hold the same from movement through the frame, and operating means carried by the frame and having connection to the cable for moving the same through the frame.

—17—

Canceled
Per A.

A scaffold including a vertical frame, a cable depending through the frame, a feeding drum carried in the frame and receiving the cable thereabout to move the frame along the cable, and a clutch mechanism carried by the frame for controlling the action of the feeding drum.

—18—

A scaffold including a corner frame, a vertical supporting cable passing through the corner frame, a feed

*Matter in italics in parentheses, stricken out in original transcript.

ing drum journaled in the frame and receiving the cable, a clutch carried in the upper end of the drum for engagement with the cable to hold the frame from downward movement thereabout, a feeding drum journaled in the frame beneath the clutch for raising the frame thereon, an operating lever carried by the frame and engaging with the drum to rotate the same, releasing means carried by the lever to release the drum therefrom, and a brake carried by the lever for engagement with the drum to control the downward movement of the frame when the drum is released.)

278

4. *(5 —19—)

A scaffold including a vertical supporting cable, spaced bars engaging loosely against the sides of the cable, a clutch mechanism carried by the bars to engage the opposite sides of the cable to hold the frame from moving down thereabout, a feeding drum carried in the frame and engaging the cable, a segment carried by the frame concentric to the drum, a ratchet carried upon one end of the drum, pawls hinged upon the segment, a spring carried by the segment and engaging with the pawls to hold the same against the ratchet, shoulders formed upon the pawls for engagement with the spring to hold the pawls out of engagement with the ratchet, and a brake shoe carried by the segment for engagement against the cable and the drum to control the downward movement of the frame when the pawls are released from the ratchet.

*(—29—

Canceled Per A. *A scaffold including a vertical frame, a cable depending through the frame, feeding means carried in the frame and engaging with the cable to raise the frame thereon, a releasing mechanism disposed in the frame to free the cable therein, and clutches carried upon the frame for engagement with the cable to control the downward movement of the frame thereabout.*

—21—

A scaffold including a vertical frame, a cable depending through the frame for supporting the same, an automatic clutch carried in the upper end of the frame and engaging with the cable to normally bind the cable in

the frame, a feeding drum journaled in the frame and engaging with the cable to raise the frame thereon, releasing means carried by the frame to free the drum and a brake shoe disposed in the frame and engaging with the drum to control the downward movement of the frame about the cable.

—22—

A scaffold including corner frames, supporting rods disposed in the lower ends of the corner frames, beams engaging across the supporting rods at the ends of the scaffold, longitudinal beams engaging over the said end beams, supporting cables depending through the frames, and controlling mechanism carried by the frames for engagement with the cables to regulate the vertical adjustment of the scaffold.)

Insert A².>

In testimony whereof, I affix my signature in presence of two witnesses.

EGBERT WHITNEY.

LOTTIE MARTIN.
M. S. WHITNEY.

Oath.

STATE OF NEBRASKA,
County of Douglas, ss:

I, Egbert Whitney, the above-named petitioner, being sworn, depose and say that I am a citizen of the United States and resident of Omaha, in the County of Douglas, and State of Nebraska, that I verily believe myself to be the original, first, and sole inventor of the improvements in Scaffold, described and claimed in the annexed specification; that I do not know and do not believe that the same was ever known or used before my invention or discovery thereof or patented or described in any printed publication in any country before my invention or discovery thereof, or more than two years prior to this application; or in public use or on sale in the United States for more than two years prior to this application, that said invention has not been patented in any country foreign to the United States on an application filed by me or my legal representative or assigns more than twelve months prior to this application; and that no application for patent on said improvements has been filed by me or my representatives or assigns in any country foreign to the United States, **(except as follows):*

EGBERT WHITNEY.

*Matter in italics in parentheses, stricken out in original transcript.

Sworn to and subscribed before me this 24th day of January, 1911.
 [SEAL.] GEORGE A. MAGNEY,
Notary Public.

Commission expires June 20, 1911.

80 "The Commissioner of Patents, Washington, D. C."

All communications respecting this application should give the serial number, date of filing, and title of invention.

M. P. T.

Department of the Interior,
 United States Patent Office.

Washington, Mar. 7, 1911.
 Mailed " " "

Egbert Whitney, c/o R. S. & A. B. Lacey, City:

Please find below a communication from the Examiner in charge
 of ^{your} *(the)* application **(of)* for patent for Scaffold; filed Jan. 28,
 1911; #605,338.

E. B. MOORE,
Commissioner of Patents.

The following references are cited:

Monjeau,	313,511;	Mar. 10, 1885;	(227-14).
Richards,	199,934;	Feb. 5, 1878;	(227-22).
Fisher,	380,254;	Mar. 27, 1888;	(227-22) x.
Jones,	503,322;	Aug. 15, 1893;	(227-22) x.
Cooper,	960,510;	June 7, 1910;	(227-22).
Nack,	281,549;	July 17, 1883;	(227-25).
Schubert,	569,240;	Oct. 13, 1896;	(227-25).
Riches,	737,145;	Aug. 25, 1903;	(227-25).
Lienderson,	959,008;	May 24, 1910;	(20-82).

The drawings *is* this application are informal, sheet 2 being mutilated. A new sheet 2 is required.

Page 5, line 20, the reference character "17" is inaccurate.

Page 6, line 6, the reference character 24 is not connected by a lead line to the part it is intended to represent. Same page, line 15, the reference character 30 is not applied to the groove in Fig. 6.

Page 7, line 3, the reference character 38, is not found. Same page, line 15, how does the "length" of the brackets position the drum so that the cable passes "in a straight line" to it, and would

*Matter in italics in parentheses, stricken out in original transcript.

not any cable pass in a straight line to a drum if the cable was under sufficient tension?

281 Page 8, line 15, the reference character 53 is applied to bolt in Fig. 3.

Page 9, line 9, the reference character 63 is not found.

#605,338 — — — — —2.

Claim 1 presents no invention over Richards, Fisher, Cooper, Majeau, Nack, Jones, Riches or others.

Claim 2 presents no invention over Riches, Jones or Nack.

Claim 3 is to an aggregation of the matter of the scaffold of the first one-and-a-half lines, with the details of the drum or winding mechanism of the rest of the claim and is rejected as an aggregation under the doctrine of *Ex parte Griffith* 85 O. G. 936.

Claim 4, line 6, the clause "for rotating the drum to raise the frame" is objected to as functional, no mechanism for accomplishing this being disclosed in the claim.

and
Claims 5, 8, 16 ^{and} 17 do not present invention over Nack.

Claims 6, 12 and 13 present no invention over Nack in view of Schubert.

Claim 7 is misleading as to the clause "engaging with the drum" as the lever does not engage the drum.

Claim 10, line 6, the clause "carried by the lever" is inaccurate. The lever appears to be carried by the segment.

2408 F. W. — Arndt

Claim 14 presents no invention over the references to Claim 1.

In Claim 18 the "feeding drum" of line 3 is reincluded in line 4. What are the "releasing means" of line 9? The clause "engaging with the drum to rotate the same" in line- 8 and 9 is functional. The reasons set forth in action on Claim 4.

Claim 20, line 4, what is the "releasing mechanism"? This claim does not seem to patentably distinguish from the references to Claim 1.

Claim 21, line 7, the expression "releasing means" is not understood.

Claim 22 is not seen to present invention over Henderson or others.

B. N. MORRIS.

Ex'r, Div. 29.

SOPER.

Serial No. 605,338, Paper No. 3.

A.

Application Room,
Mar. 18, 1911,
U. S. Patent Office.

U. S. Patent Office.
Mar. 20, 1911,
Division XXIX.

J. J. M./M. G.

March 17, 1911.

In the United States Patent Office.

Egbert Whitney, Scaffold. Filed Jan. 28, 1911.

Serial No. 605,338.

Case No. 2227-R.

Room No. 147.

Hon. Commissioner of Patents, Washington, D. C.

SIR: In response to the official action of March 7, 1911, amendment is hereby made as follows:

In the specification, page 5, line 20, change "17" to 18.

Page 7, cancel the sentence beginning in line 15 and ending in line 19, and substitute: "The brackets 39 carry the

drum 42 at the inner side of the frame so that the cable 12
A. passes in a straight line up from the drum 42 between the clutch members 29 to prevent the binding of the cable against the lower ends of the same."

Claim 3, line 1, change "having" to including.

Cancel claims 1, 2, 4, 5, 6, 7, 8, 10, 12, 13, 14, 16, 17, 18, 20, 21 and 22.

Renumber claims 3, 9, 11, 15 and 19 to 1 to 5 inclusive.

Substitute the following claims:

5 *(6). A scaffold including a corner frame, a supporting cable from the frame, co-operating clutch members carried in the upper end of the frame for engagement with the cable,
A. a drum mounted upon the frame to receive the cable thereover, a lever carried upon the frame and having operative connection with the drum for rotating the same to raise the frame, and a brake shoe carried upon the lever and binding against the drum to regulate the downward movement of the frame about the cable.

*Matter in italics in parentheses, stricken out in original transcript.

283 6 *(7). A scaffold including a corner frame, a cable passing through the corner frame, a drum journaled in the frame and receiving the cable thereover, a lever pivoted in the frame and having connection with the drum for rotating the same, a brake shoe carried by the lever for binding against the cable and the drum during rotation, and a clutch mechanism carried in the frame to hold the cable from movement therethrough when released by the lever.

7 *(8). A scaffold including a corner frame, a cable depending through the frame, an operating lever carried by the frame, locking means connected to the lever for engagement with the cable to hold the same from movement through the frame, a drum journaled in the frame and having the cable wound thereabout, and rotating means having connection with the lever and engaging with the drum for revolving the same.

8 *(9). A scaffold including a corner frame, a vertical supporting cable passing through the corner frame, a feeding drum journaled in the frame and receiving the cable, a clutch carried in the frame for engagement with the cable to hold the frame from downward movement thereabout, an operating lever carried by the frame and having connection with the drum to rotate the same, releasing means disposed in the frame and having connection with the drum and the lever to release the drum therefrom, and a brake carried by the lever for engagement with the drum to control the downward movement of the frame when the drum is released.

9 *(10). A scaffold including a corner frame, a vertical supporting cable passing through the frame, a feeding drum journaled in the frame and receiving the cable, an operating lever carried by the frame and having connection with the drum to rotate the same, a brake carried in the frame for engagement with the drum to control the downward movement of the frame, and connecting means arranged between the brake and the operating lever adapted to apply the brake upon the release of the drum from the lever.

10 *(11). A scaffold including a vertical frame, a cable depending through the frame for supporting the same, an automatic clutch carried in the upper end of the frame and engaging with the cable to normally bind the cable in the frame, a feeding drum journaled in the frame and engaging with the cable to raise the frame thereon, operating means carried by the frame and having connection with the drum for rotating the same, and a brake shoe disposed in the frame and engaging with the drum to control the downward movement of the frame about the cable.

**(12. A scaffold comprising a plurality of frames and flooring carried by the frames, vertical supporting cables passing down through the frames, and operating means carried by the frames, and engaging with the cables for moving and controlling the movements of the frames over the cables.*

Canceled

*Matter in italics in parentheses, stricken out in original transcript.

Per B. 13. *A scaffold including a frame, a supporting cable passing through the frame, a drum disposed in the frame and receiving the intermediate portion of the cable thereabout, a clutch carried in the upper end of the frame for engagement with the cable, and operating means in the frame for connection with the drum for controlling the movements of the frame.)*

REMARKS: The Richards citation discloses a frame carrying the drum which receives the entire length of the rope. This could not be used upon high buildings as the amount of cable or rope carried by the drum could not be accommodated in the frame, and the height and size of the frame and the drum necessary for receiving the cable and the operating mechanism connected with the drum would be proportionally too great to be practicable. This feature is one of the disadvantages which applicant endeavors to overcome as he has fully set forth among the principle objects of his invention recited at the top of page 3 of the specification. The Richards device could not be made to lift its own weight, and at the same time not carry all of the cable upon the drum, without such modifications and adjustments as would broadly amount to invention.

Fisher discloses a structure against which the same objections apply, with the addition that it is necessary to employ a separate cable to hold the scaffold against the wall, and that double the amount of cable is taken up supporting the drum. The depending portions of applicant's cables 12 are adapted to be fixed against the side of a building or upon the ground to hold the scaffold rigid against the wall of the building.

The remaining citations merely show frames which receive thereabout the lower ends of the cables and which are supplied with brakes and clutches to regulate the descent of the frames, and with the winding means for returning the cables about the drums when the cable is taken off the frames.

The claims herein substituted for the claims cancelled are directed to bring out clearly and definitely the features which are used in operation in the frames to effect the lifting frames as well as to control the downward movement of the same when desired. The automatic clutch, recited in the claims, serves as a safety catch to hold the frames from falling down should the operating lever and its attachments become inoperative.

Another very important feature set forth in the claims is in providing the frames with such peculiar mechanism that the cables employed may be arranged vertically and depend from the frames as well as extend up from the same, providing a scaffold which runs over the cables rather than winds the same. This feature is believed to be broadly new, and is found to be of great practical advantage in scaffolds of recent construction and as applied to buildings of considerable height.

Respectfully submitted.

R. S. & A. B. LACEY,
Attys. for Whitney.

¹Matter in italics in parentheses, stricken out in original transcript.

286 "The Commissioner of Patents, Washington, D. C."

All communications respecting this application should give the serial number, date of filing, and title of invention.

M. P. T.

Department of the Interior,
United States Patent Office.

Washington, April 15, 1911.
Mailed " " "

Egbert Whitney, c/o R. S. & A. B. Lacey, City:

Please find below a communication from the Examiner in charge
of ^{your} **(the)* application **(of)* for patent for Scaffold; filed Jan. 29,
1911; #605,338.

E. B. MOORE,
Commissioner of Patents

In response to amendment of Mar. 18, 1911:
The following additional references are cited,—

Suddoth et al.,	231,118;	Aug. 10, 1880;	(227-12)1
Tenenbom,	726,592;	Apr. 28, 1903;	(227-12)1
Spitzer,	329,497;	Nov. 3, 1885;	(227-14)1
Bovensiep,	380,173;	Mar. 27, 1888;	(227-23)1
Wood,	688,767;	Dec. 10, 1901;	(227-34)1

Claim 12 presents no invention over Henderson or Fisher in view of Tenebom, Spitzer, Bovensiep, Wood or Suddoth et al.

Claims 2 (original 9) and 13 present no invention over the references to Claim 12, involving merely the aggregation therewith of a brake as in Cooper and a clutch such as shown in Schubert.

B. N. MORRIS,
Ex'r, Dir.

SOPER.

*Matter in italics in parentheses, stricken out in original transcript.

Serial No. 605,338, Paper No. 5.

B.

Application Room,
Apr. 26, 1911,
U. S. Patent Office.

U. S. Patent Office,
Apr. 27, 1911,
Division XXIX.

J. J. M./M. G.

April 26, 1911.

In the United States Patent Office.

Egbert Whitney, Scaffold. Filed January 28, 1911.

Serial No. 605,338.

Case No. 2227-R.

Room No. 147.

Commissioner of Patents, Washington, D. C.

SIR: In response to the official communication of April 15, 1911, amendment is hereby made as follows:

Page 8, line 8, after "ratchet" insert 47.

Cancel claims "2," "12" and "13."

Renumber claims "3" to "11" to 2 to 10, respectively.

Cancel sheet 2 of the drawing and substitute the hereto attached sheet 2.

REMARKS: It is believed that the case is now in condition for allowance.

Respectfully submitted.

R. S. & A. B. LACEY,
Attys. for Whitney.

The Commissioner of Patents, Washington, D. C.

K. O'D. 2-181.

Serial No. 605,338.

Department of the Interior,
United States Patent Office.

Washington, May 2, 1911.

Egbert Whitney, c/o R. S. & A. B. Lacey, Washington, D. C.

SIR: Your Application for a patent for an Improvement in Scaffold, filed Jan. 28, 1911, has been examined and Allowed.

The final fee, Twenty Dollars, must be paid not later than
288 Six Months from the date of this present notice of allowance.

If the final fee be not paid within that period, the patent
this application will be withheld, unless renewed with an additional
fee of \$15, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and
which their term begins to run. The printing, photolithographing
and engrossing of the several patents parts, preparatory to
signing and sealing, will require about four weeks, and such work
will not be undertaken until after payment of the necessary fee.

When you send the final fee you will also send, Distinctly and
Plainly Written, the name of the Inventor and Title of Invention
Above Given, Date of Allowance (which is the date of this circular),
Date of Filing, and, if assigned, the Names of the Assignees.

If you desire to have the patent issue to Assignees, an assignment
containing a Request to that effect, together with the Fee for recording
the same, must be filed in this office on or before the date of
payment of final fee.

After issue of the patent uncertified copies of the drawings and
specifications may be purchased at the price of Five Cents Each. The
money should accompany the order. Postage stamps will not be
received.

Final fees will Not be received from other than the applicant,
assignee or attorney, or a party in interest as shown by the records of
the Patent Office.

Respectfully,

E. B. MOORE,
Commissioner of Patents.

(In left-hand margin:) In Remitting the Final Fee Give the
Serial Number at the Head of This Notice.

(In right-hand margin:) Uncertified Checks Will Not Be Accepted.

Docket Clerk,
Jun-7, 1911,
U. S. Patent Office.

Removed to #1530 City National Bank Building.

Omaha, Neb., May 29, 1911.

Commissioner of Patents, Washington, D. C.

SIR: Having made application for letters patent for Improvement
in Scaffold, which application was filed under the serial
289 number 605,338, January 28, 1911, and was allowed May 2,
1911, and having simultaneously with the execution of said
application appointed an attorney to prosecute said application, the
subscriber, hereby revokes all powers of attorney heretofore given by
him relative to said application, and appoints Willard Eddy, of the
City of Omaha, County of Douglas and State of Nebraska, having

office at 1530 City National Bank Building in the City, county
State aforesaid, his sole attorney, with full powers of substitu-
tion, association and revocation, to prosecute said application, to
make alterations and amendments therein, to receive the patent, and
transact all business in the Patent Office connected therewith.
The subscriber also requests the Commissioner of Patents to ac-
knowledge the receipt and acceptance of the foregoing power of at-
torney, addressing the acknowledgment to the applicant's subjoined
address.

Signed at Omaha, in Douglas County, Nebraska, May 29, 1911.

EGBERT WHITNEY.

Care of Willard Eddy, 1530 City Natl. Bank, Omaha, Nebr.

Accepted: Jun- 9, 1911.

F. A. TENNANT,

Assistant Commissioner.

(Endorsed:) A Whitney Egbert U. S. Patent Office, Number
1187. Received Jun- 5, 1911. Chief Clerk. To Mail Room for
Chief Clk. Letter Transferred Jun- 7, 1911. Docket Clerk.

The Commissioner of Patents, Washington, D. C.

Serial No. 605,338, Paper No. 7.

Department of the Interior,

United States Patent Office.

Washington, D. C., June 10, 1911.

You are hereby informed that Your Power of Attorney Has Been
Accepted, in the matter of the application of Egbert Whitney for
Letters Patent for an Improvement In Scaffold No. 605,338 Filed
May 28, 1911.

Very Respectfully,

E. B. MOORE,

Commissioner.

Willard Eddy, 1530 City National Bank Bldg., Omaha, Neb.

The Commissioner of Patents, Washington, D. C.

Department of the Interior,

United States Patent Office.

Washington, D. C., June 10, 1911.

You are hereby informed that Your Power of Attorney Has Been
Revoked in the matter of the application of Egbert Whitney for

Letters Patent for an Improvement in Scaffold No. 605,338 Filed
Jan. 28, 1911.

Very respectfully,

E. B. MOORE,
Commissioner.

R. S. & A. B. Lacey, Washington, D. C.

\$20, Dft., Received Jun- 21, 1911. C. Chief Clerk U. S. Patent
Office.

1530 City National Bank Building,

Omaha, Neb., June 19, 1911.

Commissioner of Patents, Washington, D. C.

SIR: Enclosed please find a draft No. 574058 of the United States
National Bank of Omaha on the American Exchange National Bank
New York, to your order and of even date herewith, for twenty
dollars in payment of the final government fee on application No.
605,338, which was filed by Egbert Whitney, January 28, 1911, for
letters patent for Improvement in Scaffold, and was allowed May 1, 1911.

In mailing the patent you will please observe the above address
the applicant's attorney.

Respectfully,

WILLARD EDDY.

291-2

2-191.

Serial No 605,338.

Address Only "The Commissioner of Patents, Washington, D. C.

C. V. Q.

Department of the Interior,

United States Patent Office.

Patent Will Issue Jul- 18, 1911.

Washington, June 22, 1911.

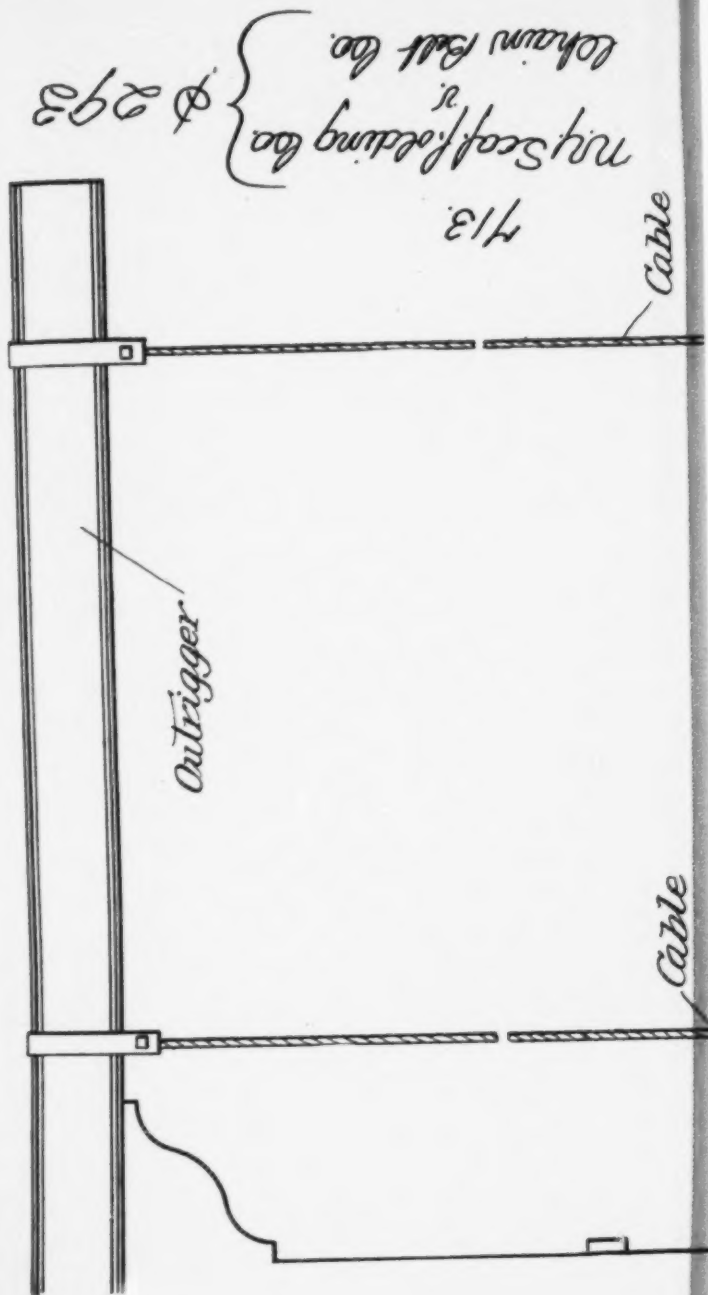
Egbert Whitney, c/o Willard Eddy, Omaha, Nebraska.

SIR: You are informed that the final fee of Twenty Dollars has
been received in your application for Improvement in Scaffold, No.
of Receipt June 21, 1911.

Very respectfully,

E. B. MOORE,
Commissioner of Patents.

D. of. Ex. 14



7/13
my Scaffolding Co.
Lehman Bldg Co.
\$ 29

Outrigger

Cable

Cable

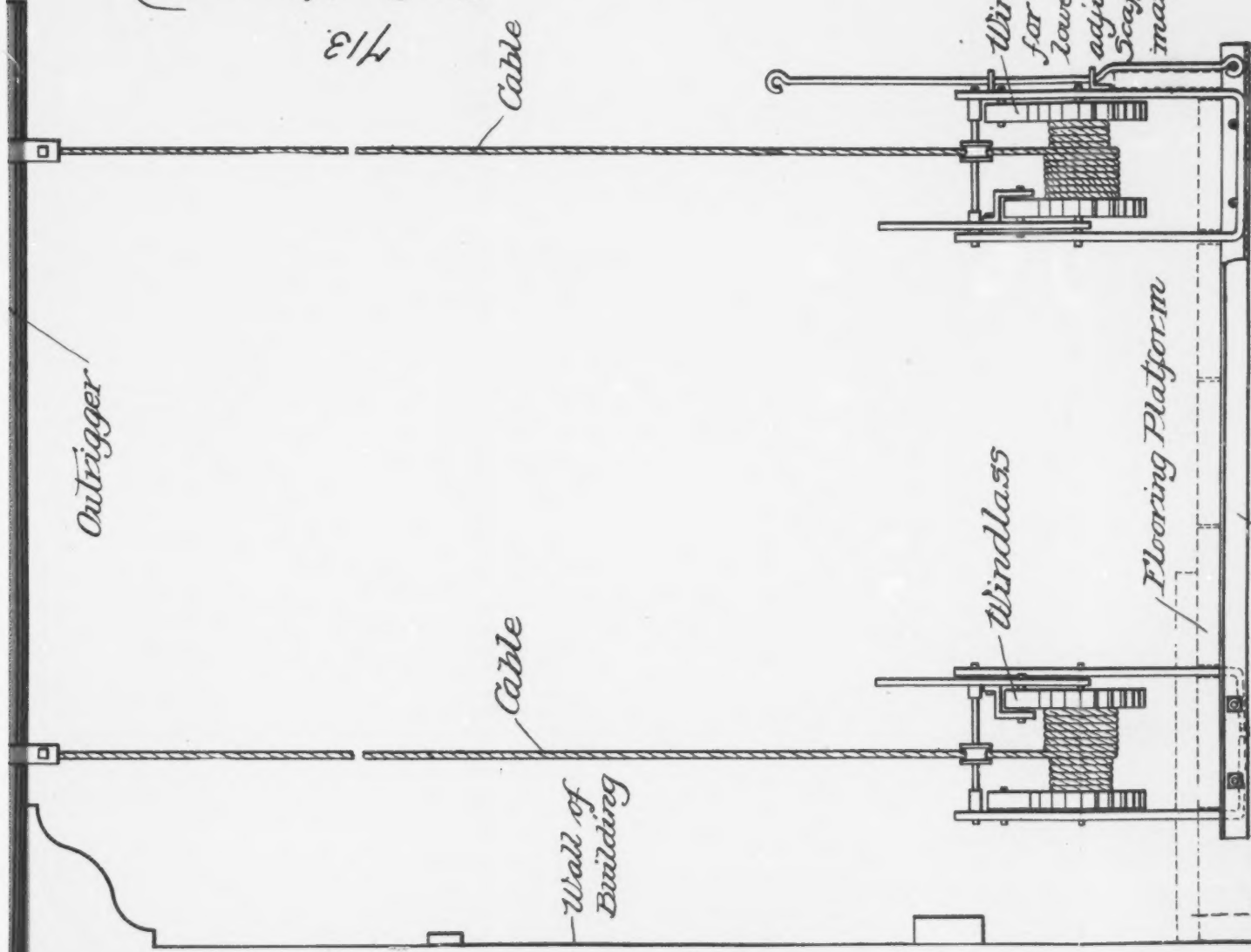
Wall of
Building

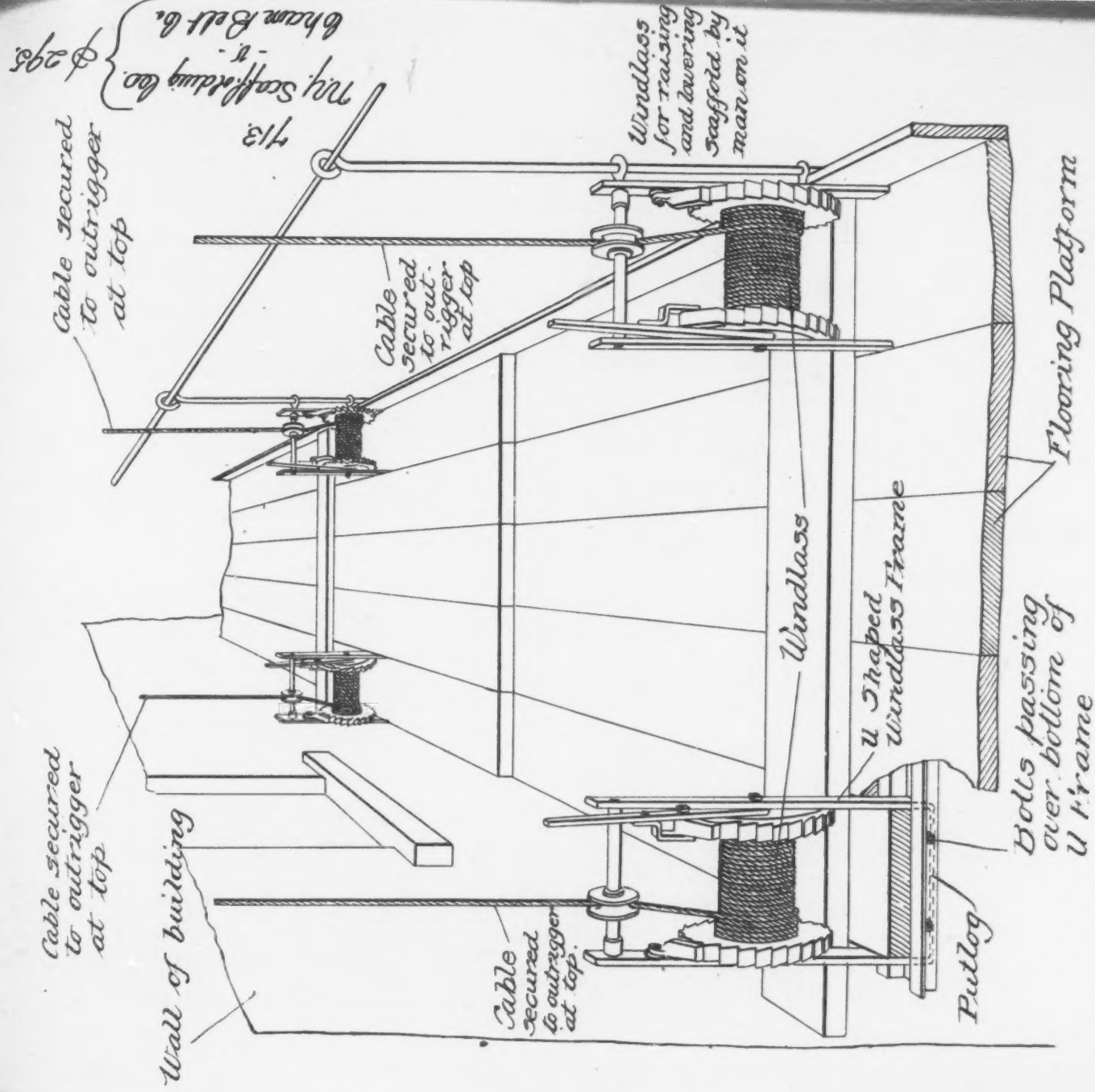
Windlass

Windlass
for raising,
lowering and
adjusting
Scaffold by
man on it

Flooring Platform

Brace for keeping
Scaffold away
from wall. Putlog





1911.

Contents.

Print.

1. Application papers. O. K.
2. Rej., Mar. 7, 1911.
3. Amend't A, Mar. 18, 1911.
4. Rej., April 15, 1911.
5. Amend't B, Apr. 25, 1911.
6. Revocation and Power of Attorney, June 7/11.
7. Notice of Rev. & Accept., June 10/11.

Patent Office printed copy of Patent No. 998,270, attached hereto
being the same as Plaintiff's Exhibit 4.

(Here follow diagrams marked pp. 293 & 295.)

Defts. Ex. 17.

To the Honorable Judges of the Circuit Court of the United States for the Seventh Circuit and Northern District of Illinois (Eastern Division), Sitting in Equity:

New York Scaffolding Company, a corporation created and organized under and in accordance with the laws of the State of New York and having its principal place of business in the city of New York in said State, brings this its bill of complaint into this court against John Griffiths and George W. Griffiths, who are citizens of the United States and inhabitants of the said Northern District of Illinois and have a regular and established place of business in the city of Chicago in said District, and carry on business in said District under the name of John Griffiths & Son, and thereupon your court complains and says:

That heretofore and before the 28th day of May, 1907, one William J. Murray, of the city of New York in the aforesaid State of New York, was the true original and first inventor of a certain new and useful improved Adjustable Scaffold for buildings and similar purposes not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof or more than two years prior to his hereafter referred to application for the hereinafter mentioned letter patent, and not patented in a country foreign to the United States on an application filed more than twelve months before his said application, and not in public use or on sale in this country for more than two years prior to his said application, and which had not been abandoned; and being so the original, first and sole inventor of said improvement the said William J. Murray duly made application for letters patent therefor in writing to the Commissioner of Patents, and in connection with the said application filed in the Patent Office a written description of said improvement, and of the manner and process of making, constructing, compounding, and using it in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which it appertains or with which it is most nearly connected to make, construct, compound, and use

the same; and duly explained the principle of said improvement, and the best mode in which he had contemplated applying that principle so as to distinguish it from other inventions; and particularly pointed out and distinctly claimed the particular improvement or combination which he claimed as his invention or discovery; that the specification and claim of the said application was duly signed by said inventor and attested by two witnesses; that the said inventor also filed in the Patent Office with his said application a drawing signed by the said inventor or his attorney in fact and attested by two witnesses; and duly made oath before a person with

United States authorized by law to administer oaths that he truly believed himself to be the original and first inventor or discoverer of the art, machine, manufacturer, composition or improvement for which he solicited a patent; that he did not know and did not believe that the same was ever before known or used, and also stated that he was a citizen of the United States.

And your orator shows that thereupon on due proceedings had letters patent of the United States bearing date the aforesaid 28th day of May, 1907, and numbered 854,959 were duly issued upon the aforesaid application in conformity with law to the said William Murray; that the said letters patent were duly issued in the name of the United States of America under the seal of the Patent Office and were signed by the Commissioner of Patents and were recorded, together with the aforesaid specification, in books in the Patent Office kept for that purpose, and contained a short title or description of the said invention or discovery correctly indicating its nature and design, and granted to the aforesaid William J. Murray, his heirs and assigns, for the term of seventeen years from and after the aforesaid 28th day of May, 1907, the exclusive right to make, use and vend the invention or discovery aforesaid throughout the United States and the Territories thereof, referring to the aforesaid specification for the particulars thereof; and that a copy of the said specification and drawing was annexed to the said letters patent and was part thereof.

And your orator brings here into court the original of the said letters patent or a copy thereof authenticated by the seal and certified by the Commissioner or Acting Commissioner of the Patent Office, and prays that the same may be taken as part of this bill.

And your orator further shows unto your Honors that on the 19th day of May, 1908, the said William J. Murray, by an instrument in writing under his hand and seal and bearing date the said 19th day of May, 1908, and duly executed and delivered on the said last named day for a valuable consideration duly assigned, transferred and set over unto your orator, and its successors and assigns, all the right, title and interest of him, the said William J. Murray, in and to the said letters patent and invention to the full end of the term for which the said letters patent were granted; and your orator shows that it thereupon became and ever since has been and now is the sole owner and holder of the said letters patent and of the rights and privileges thereby conferred or intended so to be.

And your orator further shows that the right of your orator in and to the said letters patent and in and to the invention therein set forth and claimed has been generally recognized and acquiesced in by the public and by that portion of the public which makes use in its business of scaffolds for buildings of the general character of that described and claimed in the said letters patent.

And your orator further shows that it is and ever since its organization has been largely engaged in different cities and places in the United States in putting the said invention into use and practice; and that the usual manner in which it has carried on its said business

has been to construct and lease to builders and others at a specified royalty or price per week the said scaffolds, your orator retaining the ownership of and title to all the said scaffolds so leased by it, and the same being returned to it upon the completion by the respective lessees of the work for which the scaffolds had been required.

And your orator further shows that its aforesaid use of the said invention has been and is very profitable to it; and that it would realize further large sums if all infringements and unlawful use of said invention without its consent should be prevented.

And your orator further shows that large numbers of builders and contractors in different parts of the United States have recognized your orator's rights in the said invention by leasing scaffolds as aforesaid embodying the said invention from your orator and paying therefor the royalty or price aforesaid; and that the
300 same is at the present time being done by many builders and contractors throughout the country.

And your orator further shows that except for the doings and actings of the defendants and perhaps one or two other infringers whose names are not now known to your orator, your orator now has and enjoys, and ever since the aforesaid assignment of the said letters patent to it has had and enjoyed, the sole and exclusive right in and to the letters patent and invention aforesaid.

But your orator shows that the defendants, well knowing all the premises and intending and contriving to injure your orator and deprive it of great benefits and profits which it otherwise would have received, did against the will and without the consent or allowance of your orator, within the aforesaid Eastern Division of the said Northern District of Illinois subsequent to the issue of the said letters patent and subsequent to the aforesaid assignment to your orator and prior to the filing of this bill, make, use, and sell or lease to others scaffolds to be employed in and about buildings and for building purposes, each and all of which contained and embodied the invention aforesaid, all in violation and infringement of your orator's rights aforesaid and contrary to the statute in such cases made and provided.

And your orator, upon information and belief, further shows that the said defendants by their aforesaid infringement and violation of your orator's said rights have realized and received, and are still receiving, large gains and profits, but to what amount your orator is ignorant and cannot set forth; but it prays that said defendants and each of them may be required to make a full disclosure thereof.

And your orator further shows that by the expenditure of considerable sums of money and by long continued efforts it has built up a large business in making and selling and using and leasing to builders and others the patented scaffolds aforesaid; and it further shows that by reason of all the premises it will be irreparably damaged unless the unlawful acts of the defendants shall be prevented by the order of this Honorable Court; and your orator shows that the effect of the aforesaid unlawful acts of the defendants is and will be to encourage other persons to infringe your orator's said rights.

and that your orator will be put to great expense in maintaining its title to said invention and letters patent unless the aforesaid unlawful actings and doings of the defendants can be restrained as aforesaid.

301 And your orator further shows that the aforesaid infringements of the said defendants have been and are to the injury and damage of your orator to the amount of at least Five Thousand Dollars (\$5,000).

And your orator further shows unto Your Honors that the said defendants have been warned to cease and desist from said infringements, but they have utterly refused to do so; and your orator shows that on the contrary they are prepared and have threatened, and are threatening, to continue their said violations of your orator's rights aforesaid to the great and manifest loss and injury of your orator.

Forasmuch, therefore, as your orator is remediless by the strict rule of common law and is only relievable in a court of equity where such matters are properly cognizable—

To the end therefore that your orator may have such relief as it is entitled to in the premises, it prays this Honorable Court as follows:

First. That the said defendants, and each of them may be required to full, direct and perfect answer make to all the matters and things hereinbefore alleged as fully and particularly as if they were here repeated and said defendants specially interrogated unto them and each of them, but not under oath, an answer under oath being hereby specially waived.

Second. That the said defendants may be decreed to account and pay over to your orator all the profits, gains, benefits and advantages which they have realized and received from all their aforesaid unlawful use of the said invention and infringement of the said letters patent; and further that they may pay over to your orator all the damages which have accrued to your orator by reason of their aforesaid infringement and violation of its said rights.

Third. That the defendants, and each of them, and their servants, agents, workmen and attorneys, may be perpetually enjoined and restrained by the order and decree of this Honorable Court from any further manufacture, use and selling or leasing of any scaffolds for buildings or other purposes which contain or embody the invention aforesaid.

Fourth. That a preliminary or provisional injunction may also be issued herein to the same tenor and effect as is above prayed in respect of said perpetual injunction.

302 Fifth. That a writ of subpoena ad respondendum may be issued out of and under the seal of this Honorable Court directed to the said defendants, John Griffiths and George W. Griffiths, and each of them, requiring them, and each of them, at a certain time and under a certain penalty therein stated, to be and appear before this Honorable Court there to maintain and abide by such order and decree as may be agreeable to equity and as your Honors shall see fit to make in the premises.

And your orator will ever pray &c.,

(Sgd.)

MUNDAY, EVARTS, ADCOCK &
CLARK, *Solrs. for Complnt.*

(Sgd.) C. P. GOEPEL,
of Counsel.

[SEAL.]

NEW YORK SCAFFOLDING CO.,
By W. E. CORNE, *Prest.*

SOUTHERN DISTRICT OF NEW YORK,
United States of America, ss:

W. E. Corne, of said District, being duly sworn, says that he is the President of New York Scaffolding Company, the complainant named in the foregoing bill of complaint; that he has read the said bill and knows the contents thereof; that the same is true to his knowledge except as to the matters therein stated on information and belief; and that as to those matters he believes it to be true.

(Sgd.)

W. E. CORNE.

Sworn and subscribed before me this 15 day of August, 1910.

(Sgd.)

LOUIS LANDE,

[SEAL.]

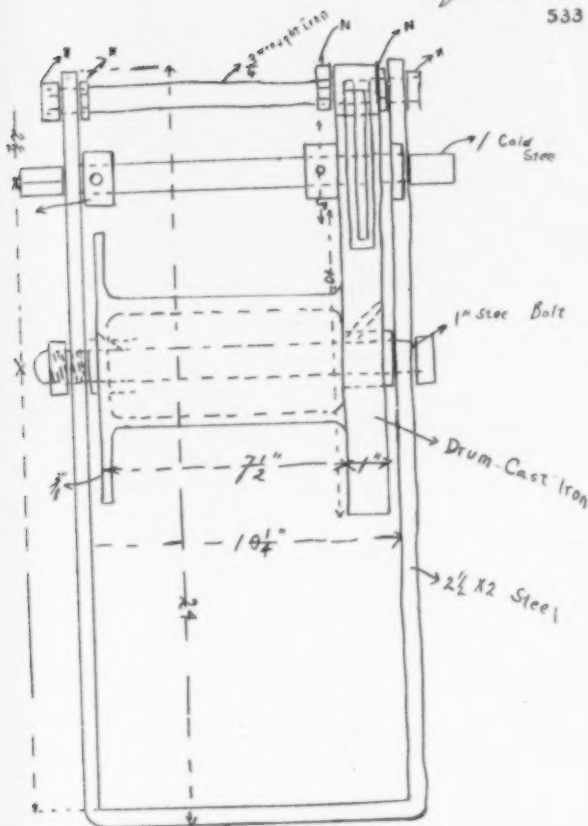
Notary Public, N. Y. Co.

(Endorsed:) Filed Sept. 9, 1910. John H. R. Jamar, Clerk.

(Here follows diagram marked p. 303.)

3 303

21/2 X 18
533



Specification For Scaffold Winch

Scale 4" = 1 ft. E H Henderson

June 15 1909

No. 713.
Wm. Scaffolding Co. } ϕ 303.
" Chain Bolt Co.



DEFENDANTS' EXHIBIT No. 18.

Petition.

To the Commissioner of Patents:

Your petitioner, Elias H. Henderson, a citizen of the United States, residing at Chicago, in the County of Cook and State of Illinois, Post-Office address, 5017 Fifth Avenue, Chicago, Illinois, prays that Letters Patent may be granted to him for the new and improved Scaffold Supporting Means (Case 2) set forth in the annexed specification; and he hereby appoints Charles A. Brown and Lynn A. Williams, of the copartnership of Brown & Williams (Reg. No. 8461), of 1550 Monadnock Building, Chicago, Illinois, his attorneys, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith.

To All Whom It May Concern:

Be it known that I, Elias H. Henderson, a citizen of the United States, residing at Chicago, in the County of Cook and State of Illinois, have invented certain new and improved Scaffold Supporting Means, of which the following is a full, clear, concise and exact description, reference being had to the accompanying drawings forming a part of this specification:

My invention relates to an improved means for supporting scaffolds used in connection with the construction of buildings and their repair. Scaffolds for this purpose are preferably of the swinging type supported by cables from outriggers temporarily secured to the upper part of the building.

It has been the practice in the past to associate hoisting means with the cables at the outriggers, and in some cases it has been proposed to use such hoisting means in connection with the cables on the scaffold to adjust the height as required in connection with the work.

My invention relates to an improved form of hoisting mechanism carried by the scaffold for securing the same to the cables, the upper ends of which are connected to outriggers, generally temporary in character, secured to the upper portion of the building. It is an object of my invention to construct such a hoisting mechanism in such a manner that it results in a maximum degree of security and a minimum cost of production.

The several drawings illustrating my invention are as follows:

Figure 1 is a perspective view of the framework of a building showing my scaffold supporting means in place upon a scaffold.

Figure 2 is an enlarged side view of a portion of the scaffold shown in figure 1.

Figure 3 is a top view of a modified form of scaffold narrower than the scaffold shown in figure 1.

Figure 4 is a side view of the scaffold shown in figure 3.

Figure 5 is a side view of the hoisting mechanism used in connection with each supporting cable.

Figure 6 is a face view of the mechanism shown in figure 5.

Similar numerals refer to similar parts throughout the several views.

As shown in figure 1, the framework 1 of the building supports at its upper portion a plurality of outriggers 2, from the overhanging portions of which cables 3 depend. Each of these cables 3 is connected at its lower end to a hoisting mechanism 4, which together serve to support the scaffold 5.

As indicated in figure 2, the frame 6 of each hoisting mechanism is so formed as to pass around the end of a cross piece 7 used to support the platform 8 of the scaffold 5.

The detail construction of each hoisting mechanism is more clearly shown by reference to figures 5 and 6. Each of such mechanisms consist of a frame 6, preferably of bar iron, bent into the shape of a U, and when so formed adapted to pass around and support one end of one of the cross pieces 7 referred to above. The upwardly extending ends of the frame 6 have extending between them a round bar 9 which forms the support for a drum 10 used to receive the cable 3, the end of which is secured to the drum by means of a cable clamp 11. The drum 10 carries at its right-hand end, as shown in figure 5, a gear 12 which meshes with a pinion 13 secured to the shaft 14, which is revolvably supported in the upwardly extending ends of the frame 6. The shaft 14 is squared at its ends to be engaged by cranks 15 at either or both of such
 307 ends, as desired, for the purpose of rotating the shaft 14 and the drum 10. The upper ends of the frame 6 are held in proper relative position by means of a bolt 16, upon which are secured collars 17 to properly space the ends of the frame 6. The bolt 16 rotatably supports a locking pawl 18 adapted to engage the gear 12 carried by the drum 10 for the purpose of holding such drum positively in any position to which it may be moved by the operation of the crank 15. A second pawl 19 is indicated as supported by a rod 20 extending between the side members of the frame 6, which pawl, as indicated at 19a, is adapted to be engaged by the foot of the person operating the drum to remove such pawl from engagement with the gear 12 carried by the drum.

The hoisting mechanism just described is also adapted for use in connection with comparatively small scaffolds which are much narrower than the style of scaffold shown in figure 1. In this connection, one hoisting mechanism may be used at each end of the scaffold 21, as shown in figures 3 and 4. In connection with scaffolds of this type, it is generally desirable to locate a supporting timber 22 longitudinally of the scaffold 21 on its under side and substantially under the middle of the scaffold. This timber has placed upon it cross pieces 23, upon which the floor 24 of the scaffold

fold is laid. The frame 6 of the hoisting mechanisms in this modification are built to pass around the ends of the timber 22 to support the scaffold.

From the above it will be seen that my construction secures the greatest possible amount of security, since the frame 6 passes around the supporting beams of the scaffold in such a way that no auxiliary means are required to secure the hoisting mechanisms to the scaffold. Furthermore, the construction is made very simple, and the machines can be cheaply made on account of the small number of parts, and further on account of the single bar constituting the framework of the machine serving also as the bearings and bearing supports for the hoisting mechanism.

While I have shown my invention in the particular embodiment herein described, I do not, however, limit myself to this construction, but desire to claim any equivalent that will suggest itself to those skilled in the art.

I claim:

1. A scaffold consisting in the combination of cross beams, floor pieces extended between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a U-shaped metal bar extending around and upward from the associated beam, and a drum rotatably supported by the side members of such bar.
2. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the associated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, such drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, and gearing between the drum and the crank shaft.
3. A scaffold consisting in the combination of cross beam, floor pieces extending between such beams, and a hoisting device associated with each — of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the associated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, such drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, gearing between the drum and the crank shaft, and a pawl for locking the drum in any desired position, such pawl pivoted to such bar and adapted to be released from the drum by the foot of the operator.
4. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its end extended upwards, and a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold.
5. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such

upwardly extended ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, and gearing between the drum and crank shaft.

6. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly extended ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, gearing between the drum and the crank shaft, and a pawl for locking the drum in any desired position, such pawl adapted to be released from the drum by the foot of the operator.

7. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extending upwards, a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, and gearing between the drum and the crank shaft, the upwardly extending ends of such bar constituting the bearings of such drum and crank shaft.

8. Hoisting mechanism for supporting a scaffold consisting in the combination of a metal bar bent to support a beam of the scaffold and its ends extended upwards, a drum supported between such upwardly extending ends, such drum adapted to receive a supporting cable of the scaffold, a crank shaft also supported by such upwardly extending ends, gearing between the drum and the crank shaft, the upwardly extending ends of such bar constituting the bearings of such drum and crank shaft, and a gravity pawl for locking the drum in any desired position, such pawl pivoted to such bar and adapted to be released from the drum by the foot of the operator.

In Witness Whereof, I hereunto subscribe my name this — day of —, 1909.

Witnesses:

Oath.

STATE OF ILLINOIS,

County of Cook, ss:

Elias H. Henderson, the above-named petitioner, being duly sworn, deposes and says that he is a citizen of the United States, and resident of Chicago, in the County of Cook and State of Illinois, and that he verily believes himself to be the original, first and sole inventor of the new and improved Scaffold Supporting Means (Case 2) set forth and claimed in the annexed specification; that he does not know and does not believe that the same were ever known or used before his invention or discovery thereof; or patented or described in any printed publication in the United States of Amer-

in any foreign country before his invention or discovery thereof, or more than two years prior to this application; or in public use or on sale in the United States for more than two years prior to this application, and that no application for foreign patent has been filed by him or his legal representatives or assigns in any foreign country.

Subscribed and sworn to before me this — day of —, 1909.

Notary Public.

Opinion.

Filed June 1, 1916.

June 1, 1916. Opinion of the Court, filed as follows:

By the COURT:

I will give my views of this case now. Necessarily they will be informal.

Taking the Henderson Patent and judging it as of the time when it was under consideration by the Patent Office, we are struck by the idea that the Patent Office first wholly rejected it, with the comment in substance that—without reference to particular claims, the structure as a whole seems to be an obvious variant from Murray's. The patentee however, as frequently happens when applicants are persistent, was evidently not content with rejection, and made an argument before the examiner and before the Office, which I think was good, in view of the state of the art.

Now, while there is proof here, there are also matters that are common knowledge, and, as indicated during the discussion of counsel in the argument of the case, this matter of scaffolding has become a distinct part of the building business. I am free to say I never knew until this case was tried there was a separate scaffolding business conducted in the way the proofs show it is conducted—a business of magnitude doubtless requiring the investment of a large amount of capital to carry it on, put out the machines and deal with contractors on various jobs. The patents here show that the development has

been rapid; and, as I said to Mr. Lane, it seems to me the Patent Office could justly take cognizance of the fact, that while Murray had made the first change from the overhead structure, and further development from that time on ought to be well received, and that while Murray may have spoken the first word, he did not speak the last word in any change from the overhead structure. Henderson pressed on the Patent Office what now seems to be an entirely simple matter, and the Patent Office allowed him a patent; that getting away from the idea of a fixed and rigid platform, he presented features which I think are novel, conducive to simplicity, and to quite an extent, safety, and he was awarded that patent; and I do not believe there is anything in this case which justifies the court in saying that the presumption which attended the act of

the Patent Office in granting the patent, has been overcome. The claims here at issue are, in my judgment, valid.

With respect to infringement, there has been a great deal of testimony here that bears upon the commercial practice, or alleged commercial practice, of the plaintiff, and I shall give that testimony neither the relevancy or force intended. I think the only question is whether the structures introduced as being manufactured by the defendant, or put out, are infringements. This "Little Wonder" machine is, when you look at it, certainly different in appearance. There is no such thing in the "Little Wonder" machine as the "rotatable drum." But the patent lays no particular stress upon the particular kind of mechanism to supply the hoisting power—that is to say, it does not appear that it must be a rotating drum and nothing else. There is nothing in the art which forbids the discharge of the function by some other equivalent. It seems to me that is just what is done here. Instead of using a drum there is a clear equivalent introduced, and I think Henderson's patent is entitled to liberality in this regard. So far as the continuous U-bar is concerned, I think the defendant has evaded the claim by simply cutting the bar into two parts and replacing it, setting it together again.

I think the plaintiff is entitled to a decree against the defendant and one may be drawn.

I have no hesitation in holding that these "Little Wonder" machines were placed broadside to the building.

By Mr. Lane: Can your honor make a finding as to whether placed in either position, they are an infringement?

By the Court: I will not pass upon that. I do hold that 312 were placed broadside to the building, and being so placed, were an infringement. My judgment on the evidence is that the change was made after this matter came up.

By Mr. Lane: You do not pass upon the question of whether there is an infringement if placed at right angles to the building, so that the decree should not include that.

By the Court: I am not so finding. It is the usual decree. I assume that the question as to the precise manner of use, whether inclusion in the decree is a matter to come up properly hereafter.

Defendants' Counsel except to the ruling.

By Mr. Lane: Notice of appeal. And I would like to make an application for a supersedeas pending appeal. I would like also to make an application for a supersedeas, and put up a bond pending the appeal.

By the Court: I will hear that at the time of the settlement of the decree. You may prepare a decree and submit it to Mr. Lane.

(The exhibits marked for identification are to be returned to the respective counsel.)

By the Court: I meant to say in the brief statement that I made that if it should happen that I have not paid sufficient deference to the testimony introduced here respecting the Blackstone and La

...le uses, that I feel the result here ought to be without prejudice. ... it was assumed to be the right of the plaintiff to introduce rebutting evidence, the record here should show my view of that for the benefit of the Court of Appeals, if the Court of Appeals takes a different view at that time your showing might alter the result, there might be the right I have reserved here.

Interlocutory Decree of June 3, 1916.

And afterwards, to-wit: on the one hundred and twenty-sixth day of said term to-wit: On the 3rd day of June, A. D. 1916, the following proceedings were had, to-wit:

Interlocutory Decree.

This cause came on to be heard at this term, and was argued by counsel, and thereupon, upon consideration thereof, it was ordered, adjudged and decreed as follows, viz:

1. That the plaintiff, New York Scaffolding Company is a corporation organized and existing under the laws of the State of New York, and owns and possesses U. S. Patent No. 959,008, granted May 24, 1910. to Elias H. Henderson.
2. That the defendant, Chain Belt Company is a corporation, organized and existing under the laws of the State of Wisconsin, and that Egbert Whitney of the City of Omaha, State of Nebraska, is an intervenor in this cause.
3. That claims 1 and 3 of said U. S. Patent No. 959,008, are good and valid.
4. That the defendant, Chain Belt Company has infringed said claims 1 and 3 of said U. S. Patent No. 959,008, before the filing of the bill of complaint herein, by making, selling and shipping certain scaffold hoisting machines, known as "Whitney Scaffold Hoist Machines," and "Little Wonder" Machines, to be used in the combinations of said claims 1 and 3 of said U. S. Patent No. 959,008, and said Egbert Whitney has infringed by causing said machines to be used in the combinations of said claims 1 and 3.
5. That this cause be referred to John F. Harper Esq., as Master pro hac vice, to ascertain and report unto the Court the gains and profits which the defendant, Chain Belt Company, has made or acquired by reason of its infringement of said claims 1 and 3, and the damages which the plaintiff has suffered by reason of said infringement, and that the plaintiff shall recover of the defendant the said profits and damages.
6. That the plaintiff recover of the defendant, Chain Belt Company, the costs of this action, to be taxed according to law.
7. That an injunction be issued under the seal of this Court, unto the said Chain Belt Company, and the said Egbert Whitney, enjoining them, and each of them, their several agents, officers, employees and all persons in privity with them, and each of them, from making or selling, or causing to be made or sold, the machine known as "Whitney Scaffold Hoist Machines," and "Little Wonder"

machines, to be used in the combinations of claims 1 and 3 of said U. S. Patent No. 959,008, or from using or causing said machine to be used in the combinations of said claims, or from infringing upon said claims in any manner whatsoever.

F. A. GEIGER,
United States District Judge.

June 3, 1916.

314 *Petition for Appeal with Supersedeas.*

Filed June 10, 1916.

June 10, 1916. Petition for appeal, filed as follows:

Petition for Appeal with Supersedeas.

To the Honorable the Judges of the United States District Court in and for the Eastern District of Wisconsin:

The above named defendants, Chain Belt Company and Egbert Whitney, feeling themselves aggrieved by the order and decree made and entered in the above-entitled cause on the 3rd day of June, 1916, holding claims 1 and 3 of plaintiff's patent in suit valid and that these defendants have infringed the same, and awarding an injunction to restrain the same, and directing an accounting to profits and damages to be paid to the plaintiff by reason of said infringement, and awarding costs to the plaintiff, do hereby appeal from said order and decree to the United States Circuit Court of Appeals for the Seventh Circuit for the reasons specified in the assignment of errors filed herewith and pray that said appeal may be allowed and that a citation be granted directed to the above-named plaintiff, the New York Scaffolding Company, commanding it to be and appear before the said United States Circuit Court of Appeals for the Seventh Circuit, to do and receive what may appertain to justice to be done in the premises; and that a transcript of the record, proceedings and papers in said cause, upon which said order and decree was made, and all models and exhibits filed in said cause may be filed with the Clerk of the United States Circuit Court of Appeals for the Seventh Circuit; that an order be made fixing the amount of security which the defendants shall give and furnish upon said appeal and that upon the giving of such security, all the further proceedings in this court including the injunction order in said decree, the accounting and payment of costs be suspended and stayed until the determination of said appeal by said United States Circuit Court of Appeals for the Seventh Circuit.

CHAIN BELT COMPANY,
EGBERT WHITNEY,
By WALLACE R. LANE,

Their Attorney.

WALLACE R. LANE,
GEORGE MANKLE,

Solicitors and of Counsel for Defendants.

Assignment of Errors.

Filed June 10, 1916.

June 10, 1913. Assignment of errors, filed as follows:

Assignment of Errors.

And now come the above-named defendants, Chain Belt Company and Egbert Whitney, doing business under the name and style of Eclipse Scaffolding Company, by their attorneys, and say that in the record and proceedings of the said court in the above-entitled cause and in the interlocutory decree made and entered therein on the 3rd day of June, 1916, there is manifest error, in that the said decree is erroneous and against the just rights of defendants, and defendants assign therefor the following reasons:

The Court erred:

1. In granting an injunction and accounting herein, whereas it should have found the equities for the defendants and dismissed the bill at plaintiff's costs.

2. In holding the Henderson Patent in suit, No. 959,008 of May 24, 1910, good and valid in law as respects claims 1 and 3 thereof in issue.

3. In holding that defendants have infringed the claims of said Henderson Patent No. 959,008, of May 24, 1910.

4. In not granting defendants' petition asking for injunctive relief against the bringing and prosecuting a multiplicity of suits and the harmful and wrongful advertising done by plaintiff.

Wherefore, defendants pray that the said decree of the United States District Court for the Eastern District of Wisconsin be reversed with costs and that the said District Court of the United States for the Eastern District of Wisconsin be directed to enter a decree dismissing its bill of complaint with costs or that such other decree may be made in the premises as the said United States Circuit Court of Appeals for the Seventh Circuit shall deem just and proper.

Dated, this 3rd day of June, 1916.

CHAIN BELT COMPANY,
EGBERT WHITNEY,
By WALLACE R. LANE,
Their Attorney.

WALLACE R. LANE,
GEORGE MANKLE,
Solicitors and of Counsel for Defendants.

316

Order of June 10, 1916.

June 10, 1916. Order allowing appeal, filed as follows:

Order Allowing Appeal with Supersedeas.

The above-named defendants, having this day filed their petition for appeal with assignment of errors, now upon motion of counsel for defendants, it is ordered that said appeal be and the same is hereby allowed to the United States Circuit Court of Appeals for the Seventh Circuit.

It is further ordered that the bond on appeal be fixed at the sum of Ten Thousand Dollars, and that upon the filing of such bond with sureties, to be approved by the court, the same shall act as a supersedeas as to the injunction, accounting and payment of all costs which injunction, accounting and payment of costs shall be suspended and stayed until the determination of said appeal by said United States Circuit Court of Appeals for the Seventh Circuit.

Done at Milwaukee, Wisconsin, this 10th day of June, 1916.

(Signed)

F. A. GEIGER,

*United States District Judge.**Supersedeas Bond.*

Filed June 14, 1916.

June 14, 1916. Supersedeas Bond, filed as follows:

Know All Men By These Presents:

That we, Egbert Whitney and Chain Belt Company as Principals and United States Fidelity and Guaranty Company, as Surety, are held and firmly bound in the full and just sum of Ten Thousand Dollars, to be paid to the said The New York Scaffolding Company its heirs, executors, administrators, successors or assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns, jointly and severally by these presents. Sealed with our seals and dated this 13th day of June, in the year of our Lord one thousand nine hundred sixteen.

Whereas, lately at the — term of the United States District Court for the Eastern District of Wisconsin in a suit depending in said Court between New York Scaffolding Company, plaintiff, and Chain

Belt Company, defendant, and Egbert Whitney was entered a
317 venor Decree was rendered against the said Chain Belt Company and Egbert Whitney and the said Chain Belt Company and Egbert Whitney have obtained an order of appeal of the said Court to reverse the decree in the aforesaid suit, and a citation directed to the said New York Scaffolding Company citing and admonishing it New York Scaffolding Company to be and appear

the United States Circuit Court of Appeals for the Seventh Circuit, at the City of Chicago, thirty days from and after the date of said citation.

Now, the condition of the above obligation is such, that if the said Chain Belt Company and Egbert Whitney shall prosecute said appeal to effect, and answer all damages and costs if they fail to make good their plea, then the above obligation to be void, else to remain in full force and virtue.

Sealed and delivered in presence of

CHAIN BELT CO., [L. s.]

By W. C. SARGENT, *Secy.*

EGBERT WHITNEY,

By G. R. WHITNEY, *Attorney in Fact.*

[L. s.]

UNITED STATES FIDELITY AND
GUARANTY COMPANY,

By HENRY M. MARSHALL,

Attorney in Fact,

By KENNETH H. WOOD,

Attorney in Fact,

Approved by

F. A. GEIGER, *Judge.*

STATE OF ILLINOIS,

County of Cook, ss:

I, Joseph R. McDonald, a Notary Public in and for the County and state aforesaid, do hereby certify that Henry M. Marshall and Kenneth H. Wood, Attorneys in fact of the United States Fidelity and Guaranty Company, who are personally known to me to be the same persons whose names are subscribed in the foregoing instrument, as such Attorneys in fact, appeared before me this day
318 in person and acknowledged that they signed, sealed and delivered the said instrument of writing as their free and voluntary act, and as the free and voluntary act of the said United States Fidelity and Guaranty Company for the uses and purposes therein set forth, and caused the corporate seal of said Company to be hereto attached.

Given under my hand and Notarial seal this 13th day of June, A. D. 1916.

[NOTARIAL SEAL.]

JOSEPH R. McDONALD,

Notary Public.

My Commission will expire November 27, 1916.

Stipulation.

Filed July 8, 1916.

July 8, 1916. Stipulation and order enlarging time to file transcript of record on appeal, filed as follows:—

Stipulation.

It is hereby stipulated and agreed by and between the parties hereto, through their respective counsel, that defendant's (appellant's) time for filing the transcript of the record on appeal in the Court of Appeals for the Seventh Circuit, be and is hereby extended to August 5, 1916.

July 3, 1916.

(Signed)

WALLACE R. LANE,
Counsel for Defendant.

C. P. GOEPEL,
Counsel for Plaintiff.

Order of July 8, 1916.

Order.

The foregoing stipulation of counsel is hereby approved and it is ordered that the time for filing the transcript of record on appeal in the Court of Appeals for the Seventh Circuit, be and is hereby extended to and including the 5th day of August, 1916.

(Signed)

F. A. GEIGER,
United States District Judge.

July 15, 1916. Motion of defendants and order of Court, in certain exhibits, filed as follows:—

319

Motion.

Filed July 15, 1916.

Motion.

Come now the defendants (appellants) in the above-entitled cause, and ask the court for an order providing that in making up the record on appeal herein, the following exhibits need not be made a part of the transcript and need not be reproduced in the appeal record, but may be transmitted to the Court of Appeals as exhibits:

1. Plaintiff's Exhibit No. 18, Henderson catalogue.
2. Defendants' Exhibits Nos. 1, 2 and 4, Catalogues and Circulars.
3. Defendants' Exhibits Nos. 7 and 8, Photographs.

4. Defendants' Exhibit No. 16, Circular.
5. Defendants' Exhibit No. 18, Sketch.
6. Plaintiff's Exhibit Nos. 26 and 27, File Wrappers.

(Signed)

WALLACE R. LANE,
GEORGE MANKLE,

Counsel for Defendants-Appellants.

Order of July 15, 1916.

Order.

Upon hearing counsel for the respective parties and after due consideration had, it is ordered, adjudged and decreed that in making up the record on appeal, the following exhibits need not be reproduced in the appeal record, but may be transmitted to the Court of Appeals as exhibits:

1. Plaintiff's Exhibits No. 18, Henderson catalogue;
2. Defendants' Exhibits Nos. 1, 2 and 4, Catalogues and Circulars.
3. Defendants' Exhibits Nos. 7 and 8, Photographs.
4. Defendants' Exhibits No. 16, Circular.

(Signed)

F. A. GEIGER,

United States District Judge.

Stipulation.

It is hereby stipulated and agreed, by and between the parties hereto, through their respective counsel, with the approval of the court, that

1. The evidence adduced in the lower court by the respective parties need not be stated in narrative form as required by Equity Rule 75 but that the said evidence may be set forth in the transcript of record on appeal in the same form in which it appears in the transcript of the trial proceedings in the court below.

2. In printing the transcript of record on appeal, the caption of the various papers may be omitted.

C. P. GOEPEL,

Solicitor for Plaintiff-Appellee.

WALLACE R. LANE,

Solicitor for Defendant-Appellant.

Order of June 21, 1916.

It is so ordered this 21 day of June, 1916.

KOHLSAAT,

United States Circuit Judge.

Defendants' Praecept for Transcript of Record.

Filed June 30, 1916.

June 30, 1916. Defendant's praecipe for appeal record, filed as follows:

Præcipe for Transcript.

To the Clerk of the United States District Court, Milwaukee, Wisconsin.

SIR: Come now the defendants herein, by their counsel, and request that the appeal record be made up and that the transcript contain one copy each of the following, to-wit:

1. Bill of Complaint.
2. Henderson Patent No. 959,008.
3. Answer to Chain Belt Company.
4. Interrogatories propounded by defendant.
5. Interrogatories propounded by plaintiff.
6. Answer to defendant's interrogatories.
7. Motion to strike and objections to interrogatories.
8. Order of January 18, 1916, relative to interrogatories.
9. Order of January 18, 1916, as to answering objections filed by defendant.
- 321 10. Objections to revised interrogatories propounded by plaintiff.
11. Rule to show cause dated March 24, 1916.
12. Petition of intervention.
13. Petition for injunction restraining advertising and for other purposes.
14. Affidavit of W. C. Englar dated March 20, 1916.
15. Affidavit of George F. Noland (with copy of telegram attached) dated March 20, 1916.
16. Affidavit of Edward C. Strathmann dated March 22, 1916.
17. Affidavit of Egbert Whitney dated April 6, 1916 (with copies of letters as attached).
18. Affidavit of William E. Corne dated March 31, 1916.
19. Affidavit of Carl P. Goepel dated April 1, 1916.
20. Rule to Show Cause dated April 22, 1916.
21. Supplemental and additional bill of complaint.
22. Order of April 21, 1916.
23. Petition for leave to file supplemental and additional bill of complaint.
24. Affidavit of Carl P. Goepel dated April 17, 1916.
25. Order of April 29, 1916.
26. Answers to revised interrogatories filed by plaintiff.
27. The joint and several answers of defendants to the supplemental and additional bill of complaint.
28. Amended joint and several answers of defendants to the supplemental and additional bill of complaint.
29. Amendment to answers dated June 1, 1916.
30. All of the testimony and exhibits (except such as are sent up as physical exhibits in the case).
31. Opinion and decision of Judge Geiger.
32. Interlocutory Decree dated June 3, 1916.
33. Petition for Appeal with Supersedeas.

34. Assignment of errors.
35. Order allowing appeal and supersedeas.
36. Supersedeas and appeal bond.
37. Citation showing service.
38. Copy of this præcipe.
39. Order as to exhibits.
40. Stipulation of counsel as to record on appeal and order of court approving same.
41. Order of court approving record.

(Signed)

WALLACE R. LANE,
Counsel for Defendants-Appellants.

Plaintiff's Præcipe for Transcript of Record.

Filed July 8, 1916.

July 8, 1916. Plaintiff's præcipe for appeal record, filed as follows:—

Præcipe for Transcript.

To the Clerk of the United States District Court, Milwaukee, Wisconsin.

SIR: Comes now the plaintiff, by its counsel, and requests that the appeal record be made up and that the transcript contain one copy each of the following, to-wit:

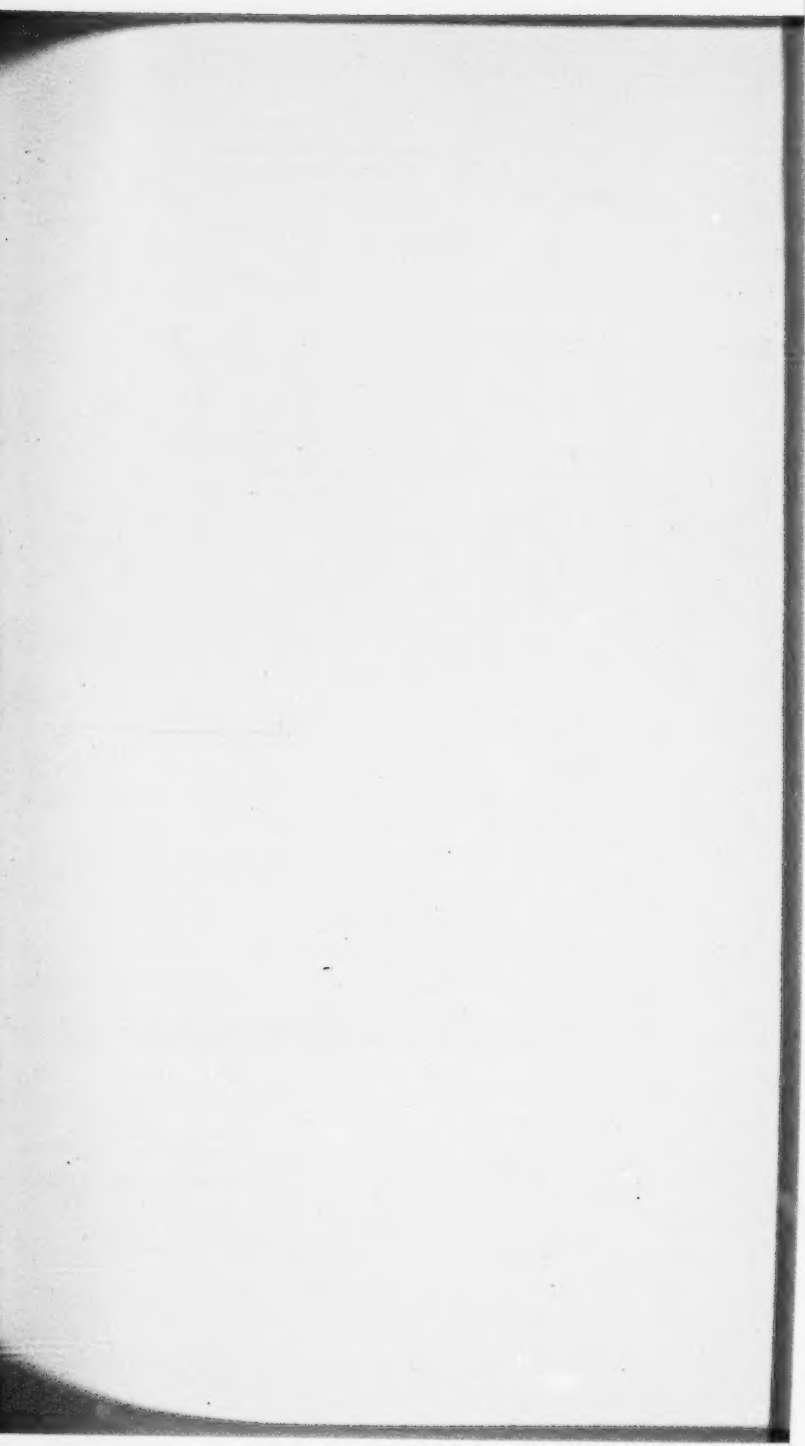
1. Bill of complaint.
2. Henderson Patent No. 959,008.
3. Answer to Chain Belt Company.
4. Interrogatories propounded by defendant.
5. Interrogatories propounded by plaintiff.
6. Answers to defendants' interrogatories.
7. Motion to strike and objections to interrogatories.
8. Order of January 18, 1916, relative to interrogatories.
9. Order of January 18, 1916, as to answering objections filed by defendant.
10. Objections to revised interrogatories propounded by plaintiff.
11. Rule to show cause dated March 24, 1916.
12. Petition of intervention.
13. Petition for injunction restraining advertising and for other purposes.
14. Affidavit of W. C. Englar dated March 20, 1916.
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17. Affidavit of Egbert Whitney dated April 6, 1916 (with copies of letters as attached).
18. Affidavit of William E. Corne dated March 31, 1916.
19. Affidavit of Carl P. Goepel dated April 1, 1916.
20. Rule to Show Cause dated April 22, 1916.

21. Supplemental and additional bill of complaint.
22. Order of April 21, 1916.
23. Petition for leave to file supplemental and additional bill of complaint.
- 323-5 24. Affidavit of Carl P. Goepel dated April 17, 1916.
25. Order of April 29, 1916.
26. Answers to revised interrogatories filed by plaintiff.
27. The joint and several answers of defendants to the supplemental and additional bill of complaint.
28. Amended joint and several answers of defendants to the supplemental and additional bill of complaint.
29. Amendment to answers dated June 1, 1916.
30. Each and every documentary exhibit, photograph and sketch.
31. The complete testimony of the witnesses.
32. Opinion and decision of Judge Geiger.
33. Interlocutory Decree dated June 3, 1916.
34. Petition for Appeal with Supersedeas.
35. Assignment of errors.
36. Order allowing appeal and supersedeas.
37. Supersedeas and appeal bond.
38. Citation showing service.
39. Copy of this præcipe.
40. Order as to exhibits.
41. Stipulation of counsel as to record on appeal and order of court approving same.
42. Order of court approving record.

(Signed)

C. P. GOEPEL,
Counsel for Plaintiff-Appellee.

(Here follow diagrams and specifications marked pp. 326 to 404 inclusive.)



326

E. H. HENDERSON.
SCAFFOLD SUPPORTING MEANS.
APPLICATION FILED JUNE 19, 1909.

959,008.

Patented May 24, 1910.

no 713
Mey. Scaffolding Co.
Chas. Bell Co.

Fig 1

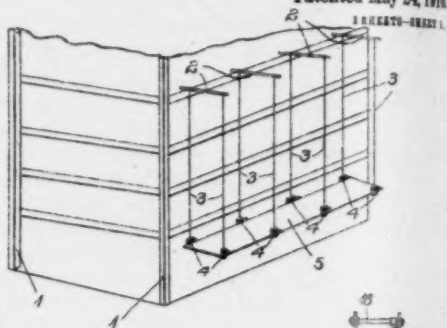


Fig 2.



Fig 3.

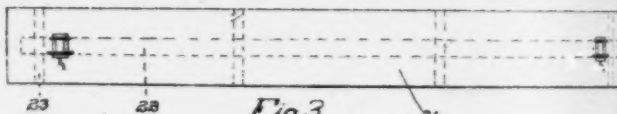
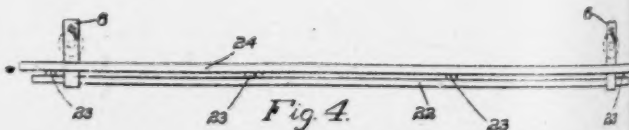


Fig 4.

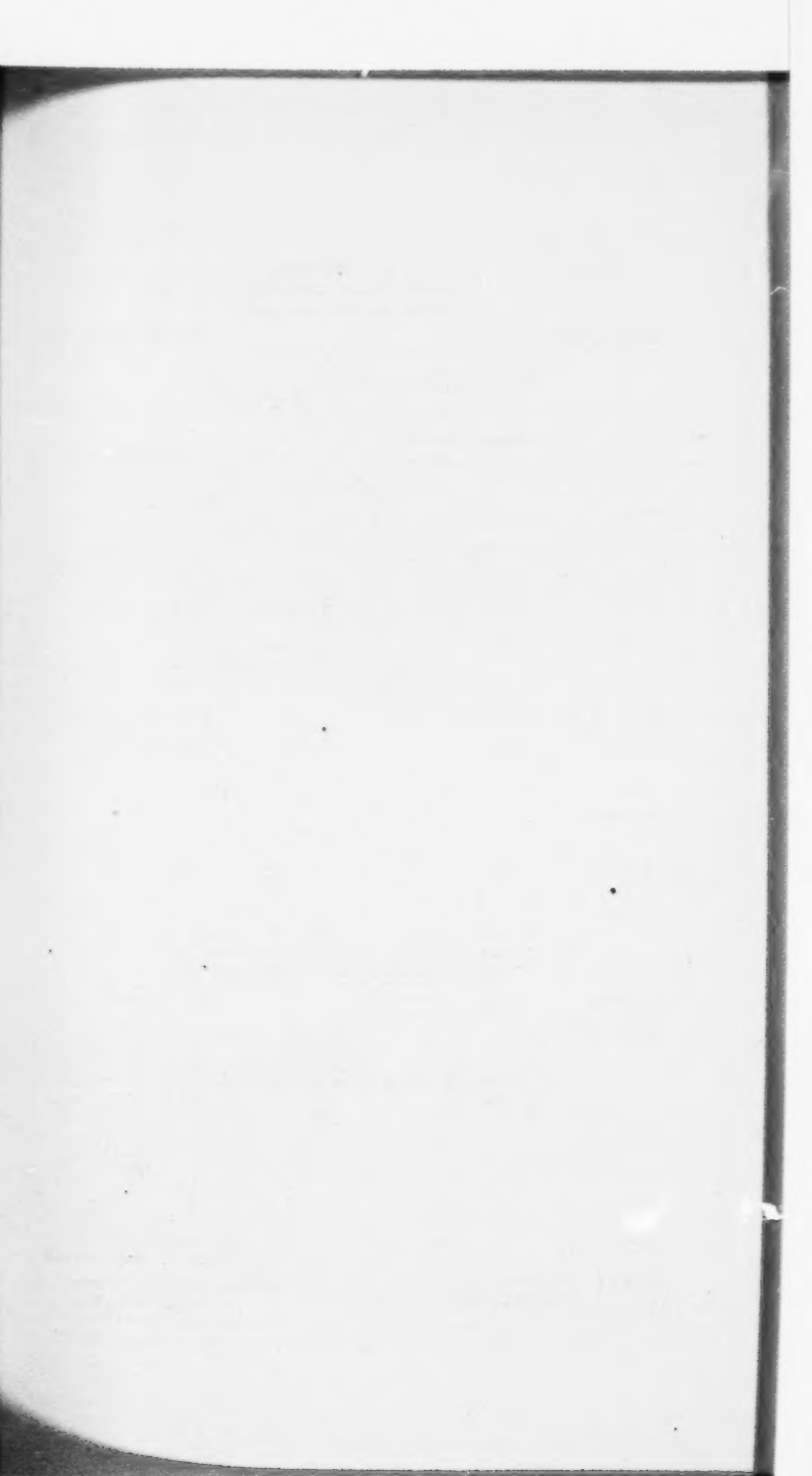


Witnesses

George C. Higham,
agent S. McCalib

By

Inventor
Elias H. Henderson
Mowbray & Williams
Attorneys



328

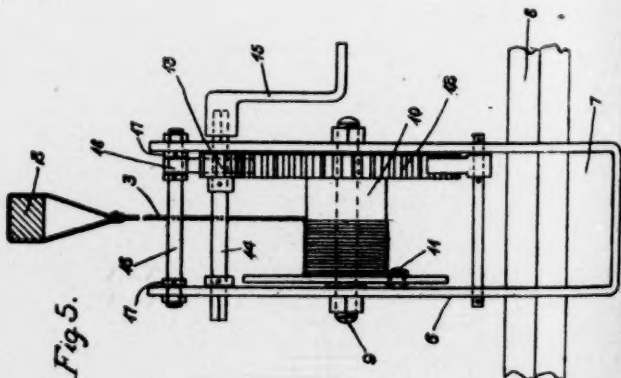
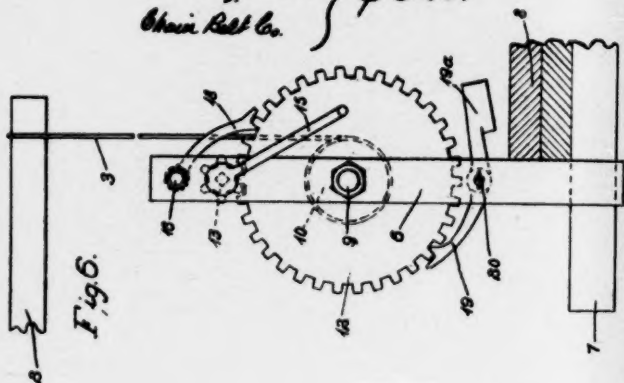
E. H. HENDERSON.
SCAFFOLD SUPPORTING MEANS.
APPLICATION FILED JUNE 19, 1909.

959,008.

Patented May 24, 1910

2 SHEETS-SHEET 1.

7/3.
Mr. Scaffolding Co. }
Chain Belt Co. } 328.



Witnesses

George C. Higham.
Albert L. McCalister.

Inventor
Elias H. Henderson
By Brown & Williams
Attorneys

UNITED STATES PATENT OFFICE.

ELIAS H. HENDERSON, OF CHICAGO, ILLINOIS.

SCAFFOLD-SUPPORTING MEANS.

959,008.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed June 19, 1906. Serial No. 903,082.

To all whom it may concern:

Be it known that I, ELIAS H. HENDERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and Improved Scaffold-Supporting Means, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improved means for supporting scaffolds used in connection with the construction of buildings and their repair. Scaffolds for this purpose are preferably of the swinging type supported by cables from outriggers temporarily secured to the upper part of the building.

It has been the practice in the past to associate hoisting means with the cables at the outriggers, and in some cases it has been proposed to use such hoisting means in connection with the cables on the scaffold to adjust the height as required in connection with the work.

My invention relates to an improved form of hoisting mechanism carried by the scaffold for securing the same to the cables, the upper ends of which are connected to outriggers, generally temporary in character, secured to the upper portion of the building.

It is an object of my invention to construct such a hoisting mechanism in such a manner that it results in a maximum degree of security and a minimum cost of production.

The several drawings illustrating my invention are as follows:

Figure 1 is a perspective view of the framework of a building showing my scaffold supporting means in place upon a scaffold. Fig. 2 is an enlarged side view of a portion of the scaffold shown in Fig. 1. Fig. 3 is a top view of a modified form of scaffold narrower than the scaffold shown in Fig. 1. Fig. 4 is a side view of the scaffold shown in Fig. 3. Fig. 5 is a side view of the hoisting mechanism used in connection with each supporting cable. Fig. 6 is a face view of the mechanism shown in Fig. 5.

Similar numerals refer to similar parts throughout the several views.

As shown in Fig. 1, the framework 1 of the building supports its upper portion

a plurality of outriggers 2, from the overhanging portions of which cables 3 depend. Each of these cables 3 is connected at its lower end to a hoisting mechanism 4, which together serve to support the scaffold 5.

As indicated in Fig. 2, the frame 6 of each hoisting mechanism is so formed as to pass around the end of a cross piece 7 used to support the platform 8 of the scaffold 5.

The detail construction of each hoisting mechanism is more clearly shown by reference to Figs. 5 and 6. Each of such mechanisms consists of a frame 6, preferably of bar iron, bent into the shape of a U, and when so formed adapted to pass around and support one end of one of the cross pieces 7 referred to above. The upwardly extending ends of the frame 6 have extending between them a round bar 9 which forms the support for a drum 10 used to receive the cable 3, the end of which is secured to the drum by means of a cable clamp 11. The drum 10 carries at its right-hand end, as shown in Fig. 5, a gear 12 which meshes with a pinion 13 secured to the shaft 14, which is revolutely supported in the upwardly extending ends of the frame 6. The shaft 14 is squared at its ends to be engaged by cranks 15 at either or both of such ends, as desired, for the purpose of rotating the shaft 14 and the drum 10. The upper ends of the frame 6 are held in proper relative position by means of a bolt 16, upon which are secured collars 17 to properly space the ends of the frame 6. The bolt 16 rotatably supports a locking pawl 18 adapted to engage the gear 12 carried by the drum 10 for the purpose of holding such drum positively in any position to which it may be moved by the operation of the crank 15. A second pawl 19 is indicated as supported by a rod 20 extending between the side members of the frame 6, which pawl, as indicated at 19', is adapted to be engaged by the foot of a person operating the drum to remove such pawl from engagement with the gear 12 carried by the drum.

The hoisting mechanism just described is also adapted for use in connection with comparatively small scaffolds which are much narrower than the style of scaffold shown in Fig. 1. In this connection, one hoisting mechanism may be used at each end of the scaffold 21, as shown in Figs. 3 and 4. In connection with scaffolds of this type, it is generally desirable to locate a

supporting timber 29 longitudinally of the scaffold 21 on its under side and substantially under the middle of the scaffold. This timber has placed upon it cross pieces 32, upon which the floor 24 of the scaffold is laid. The frames 6 of the hoisting mechanisms in this modification are built to pass around the ends of the timber 29 to support the scaffold.

- 16 From the above it will be seen that my construction secures the greatest possible amount of security, since the frame 6 passes around the supporting beams of the scaffold in such a way that no auxiliary means are required to secure the hoisting mechanism to the scaffold. Furthermore, the construction is made very simple, and the machines can be cheaply made on account of the small number of parts, and further on account of the single bar constituting the framework of the machine serving also as the bearings and bearing supports for the hoisting mechanism.

25 While I have shown my invention in the particular embodiment herein described, I do not, however, limit myself to this construction, but desire to claim any equivalent that will suggest itself to those skilled in the art.

30 I claim:

1. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each

hoisting device consisting of a continuous U-shaped metal bar extending around the under side of and upward from the associated beam, and a hoisting drum rotatably supported by the side members of such bar.

2. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the associated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, each drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, and gearing between the drum and the crank shaft.

3. A scaffold consisting of a plurality of U-shaped bars arranged in pairs, a cross beam laid in and extending between each pair of such U-shaped bars, a floor laid upon said cross beam, a drum rotatably supported between the upwardly extending side members of each of said U-shaped bars, and means for controlling the rotation of said drum.

In witness whereof, I hereto subscribe my name this 16th day of June, 1906.

ELIAS H. HENDERSON.

Witnesses:

ALBERT C. BELL,
ROBERT F. BECKER.

(Her follows diagram marked p.332)



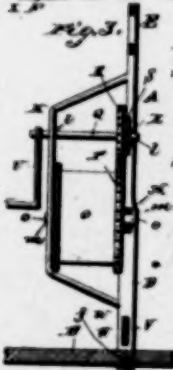
332

(No Model.)

C. D. BOWYER & W. H. CASPERSON.
PAINTER'S STAGE.

No. 382,252.

Patented May 1, 1888.



Witnesses.

W. B. Taylor
C. E. Ayer

Inventor,
Charles D. Bowyer
William H. Casperson
by *Chas. D. Bowyer*
Attorney

713
New Scaffolding Co. of N.Y.
Chas. D. Bowyer

UNITED STATES PATENT OFFICE.

CHARLES D. BOWYER AND WILLIAM H. CASPERSON, OF CAMDEN, NEW JERSEY.

PAINTER'S STAGE.

SPECIFICATION forming part of Letters Patent No. 382,252, dated May 1, 1888.

Application filed December 14, 1887. Serial No. 481,986. (No model.)

In all whom it may concern:

Be it known that we, CHARLES D. BOWYER and WILLIAM H. CASPERSON, citizens of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Painter's Stages, of which the following is a specification.

Our invention relates to improvements in painters' stages; and it has for its objects to provide a simple, strong, and effective device which may be readily applied in the operative position to a house.

We desire, further, to provide a stage with improved means whereby the person thereon may raise and lower the same, thus obviating the necessity of a person on the ground to operate the stage.

It is our object, farther, to provide improved means for maintaining the stage at the proper or desired distance from the wall of the house.

With these objects in view the invention consists in a certain novel construction and arrangement of parts, fully set forth hereinafter in connection with the accompanying drawings, wherein—

Figure 1 is a front view of a stage attached in the operative position to a house. Fig. 2 is a side view of the same. Fig. 3 is a vertical central section of one of the supports. Fig. 4 is a detail view of the connection between the hook and the frame of the stage. Fig. 5 is a similar view with the hook and frame connected, so as to form a stationary stage.

Referring by letter to the drawings, A designates the support, one of which is arranged at each end of the plank B, and the said support comprises the frame C and the hook G. The frame consists of the side bars, D D, which converge at their upper ends and are connected to a disk, E, and the horizontal supporting-bar F, which is provided on its upper side with spurs f f, adapted to engage in the plank. The hook G is double, and consists of the outer bar, G', and the inner bar, G'', which are attached at their lower ends to a disk, H, and converge at their free ends to a point. Bracing-rods g are arranged between the bars G' and G'' at intervals to hold them at the proper distance apart. The disk H is

provided with a central aperture, A, and the disk E is provided with a similar central aperture, a.

I I represent pulley-blocks, which are attached, respectively, to the disks E and H by means of the hooks i i, which are engaged in the apertures A and a, and K represents a rope which runs through the said blocks. A horizontal brace, L, is arranged between the converging portions of the side bars, D D, and it is provided with a bearing, l. A similar brace, M, is arranged between the side bars a short distance below the brace L, and it is also provided at its center with a bearing, m.

N represents a bracket which is attached to the frame C, and it is provided with bearings l and m, which align, respectively, with the bearings i and m in the frame.

O represents a drum, provided with transverse o o, which are mounted in the bearings m m, and the drum is also provided with a peripheral series of gear-teeth, P. A shaft, Q, is mounted in the bearings l l, and it carries a gear-wheel, R, which engages with the teeth on the drum, whereby, when the gear-wheel is rotated, the drum is similarly operated. A ratchet-wheel, S, is secured rigidly to the shaft or the gear-wheel, and it is engaged by the pawl T, which is mounted on the brace L or any other suitable portion of the frame. The opposite end of the shaft Q is provided with a crank, U, whereby the gear-wheel may be rotated. The end of the rope K is attached to the drum, and therefore the frame C may be raised or lowered at will by winding or unwinding the rope. The pawl T will hold the frame at the desired elevation.

The operation of this device will be readily understood from the foregoing description. The stage is suspended from the cornice of a building by engaging the hooks G G therein, and therefore the device may be used in positions where it is impossible for a support from the ground to be erected; also, it is not always convenient to use stage supporting brackets which must be attached to windows, as it may happen that the windows are not in the desired positions. The hooks G may, however, be engaged over the sills of windows where it is preferred.

V V represent aligned apertures in the side

bars, D D, and an adjustable guide-arm, W, is arranged in the said apertures and extends inward toward the house to act as a fender. The arm W is provided with a series of perforations, *w w*, which are adapted to receive pins X X. These pins are inserted in the perforations on the outer sides of the bars D D, so as to secure the adjustable arm in the desired position. The inner or contact end of the arm is provided with a small rubber roller, Y, which is adapted to bear against the wall of the house and roll on the same when the stage is raised or lowered. The stage is thus guided in its vertical motion and prevented from swinging.

15 The arm W passes over the end of the plank B, close to the upper surface thereof, and therefore prevents the same from being lifted from the spurs *s*, and thus detached from the supports. The arms W, therefore, serve two purposes—namely, that of an adjustable guide-arm and a retaining-bar for the stage-plank.

The blocks and the other portions of the hoisting device may, if desired, be removed, and the bolt Z may be engaged in the apertures *a* and *b* in the disks, as shown in Fig. 5, to render the stage stationary. It will be found of advantage, however, to be able to vary the elevation of the stage at will.

The hook G is made in the peculiar form described for the reason that it may thus be made much lighter than a solid hook for the same strength. The outer and inner bars mutually brace and support each other for the reason that they are rigidly connected at intervals by the bracing-welds.

25 The absence of complicated construction in this stage renders it cheap to manufacture, easily operated, not liable to get out of order, and light, thereby enabling it to be readily transported. There is no erection of scaffolding or heavy frame-work in connection therewith. It is arranged in the operative position simply by engaging the hooks in the cornice of the building and drawing the plank-supporting frames up by means of the hoisting devices.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a stage, the combination of the books G G, the frames C C, depending from the books and having the horizontal supporting-bars F, the plank B, resting at its ends on the bars F, and the arms W W, attached to the frames and passing over the plank, substantially as and for the purpose specified.

2. In a stage, the combination, with the books, of the depending frames C, having supporting-bars F F, provided with spurs *ff* on their upper sides, the plank B, resting at its ends on the said bars and engaging the spurs, and the removable arms W W, attached to the frame and passing over the plank adjacent to the upper surface thereof, substantially as specified.

3. In a stage, the combination, with the books G G, of the frames C C, depending therefrom and having the side bars, D D, provided with aligned apertures V V, and the horizontal bars F F, the plank B, attached to the frame, the guide-arms W, arranged in the apertures V V and having the perforations *w w*, and the pins X X, engaging the perforations and bearing against the bars D D, substantially as specified.

4. In a stage, the combination of the books G, comprising the outer and inner bars, G' and G'', converging to a point at their upper ends, the bracing-welds arranged at intervals between the said bars, and the apertured disk H, attached to the lower ends of the bars, the frames C C, comprising the converging side bars, D D, connected at their lower ends by the horizontal bars F, and the apertured disk E at the upper ends of the side bars, the plank B, resting at its ends on the horizontal bars F, the pulleys I I, having hooks *i i*, which are engaged in the apertured disks, the ropes K, passing through the pulleys, and the drums mounted on the frames C and adapted to wind or unwind the ropes, substantially as and for the purpose specified.

5. In a stage, the combination of the books G G, having pulleys I attached to their lower ends, the depending frames C C, having pulleys I attached to their upper ends, the inward-extending guide-arms W, attached to the frames and having rollers on their ends, and the hoisting devices mounted on the frames C and comprising the drums O, having peripheral series of gear-teeth, the gear-wheels R, meshing with the teeth on the drums and having a crank, U, attached thereto, the ratchet-wheels carried by the gear-wheels, the pawls engaging in the ratchet-wheels, and the ropes K, passing through the pulleys I and attached at their lower ends to the said drum, substantially as specified.

6. In a stage, the combination, with the supporting-hooks having pulleys attached thereto and the plank-supporting frames having pulleys attached thereto, of the drums mounted on the said frames, the gear-wheels R, meshing with gear-teeth on the flanges of the drums, the ratchet-wheels carried by the said gear-wheels, the pawls mounted on the frames and engaging the said ratchet-wheels, the crank-arms connected to the gear-wheels, and the ropes K, attached to the drum and passing around the said pulleys, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

CHARLES D. BOWYER.
WILLIAM H. CASPERSON.

Witnesses:

ROBT. S. TUSTON,
CHAR. L. REYER.

(Here follows diagram marked p.336)



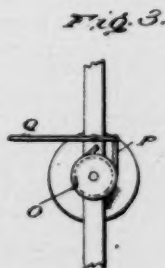
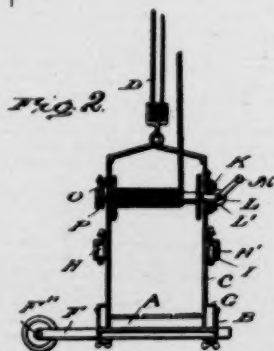
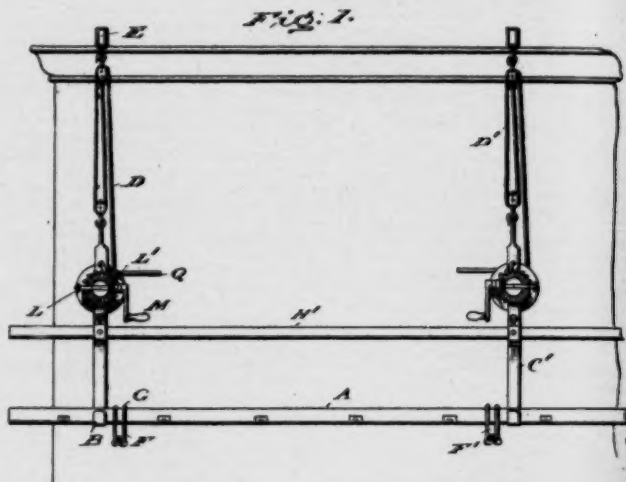
No. 607,805.

J. SLADEK.
SCAFFOLD.

Patented July 19, 1898.

(No Model.)

(Application filed Sept. 26, 1897.)



7/13.
724 Scaffolding Co.
Chain Roll Co.

Witnesses

In witness whereof
J. S. Sladek

Inventor

Johann Sladek
7/13

UNITED STATES PATENT OFFICE.

JOHANN SLADEK, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
GEORGE LADEWICH, OF SAME PLACE.

SCAFFOLD.

SPECIFICATION forming part of Letters Patent No. 607,805, dated July 19, 1898.

Application filed September 29, 1897. Serial No. 653,481. (No model.)

To all whom it may concern:

Be it known that I, JOHANN SLADEK, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Scaffolds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to painters' scaffolds; and its novelty consists in the construction and adaptation of the parts, as will be more specifically hereinafter pointed out.

Referring to the accompanying drawings, Figure 1 is a front elevation of the scaffold suspended on the exterior of a building. Fig. 2 is an end view of the same, and Fig. 3 is a detailed view of the brake employed when lowering the device.

In the drawings, A is the framework which supports the platform. This frame and the platform may be made of any suitable material; but I show them as made of wood, which is most commonly employed for that purpose. The side bars of the frame rest in stirrups B, secured to or made integral with the suspension-frames C and C', which are centrally suspended from the beam E, placed upon the roof of the building, by the blocks and tackles D and D'.

The structure is kept from touching the side of the house by two arms F and F', each of which is adjustably secured to the platform A by means of clamps, as G, and each of which is provided with means, as the anti-friction-rollers F'', for modifying the nature and extent of the contact of the arms with the building.

Said rolls H and H' are adjustably secured to the frames C and C' by any suitable means—for instance, hinged hasps or brackets I, as shown. Isuitable bearings on each of the suspension-frames C and C' is mounted a windlass J, upon which is wound the rope of the block and tackle. On the outer end of the shaft of the windlass is mounted a bevelled gear-wheel K, adapted to mesh with a bevelled pinion L', mounted on a cross-shaft

L and actuated by a crank M. Each windlass is also provided with a pawl N and ratchet N'. A drum O is mounted on the windlass at its inner end, and a strap-brake P is passed around the same and terminates in a lever Q, fulcrumed on the suspension-frame C, thereby controlling the motion of the device in lowering it.

The operation of my device will be readily seen from the foregoing description of its parts. The great advantage derived from its use is freedom from the dangerous tendency to tip so common in scaffolds of this class. The double pulley always secures a lift from the center, and as each windlass is wound from the inner side of the suspension-frame and one winds to the left and the other to the right the lateral pull of the rope on one windlass is balanced by the equal pull of the rope on the other windlass in the opposite direction. Placing the operating-crank of the windlass on the inner side of the suspension-frame also avoids the necessity for stepping around its outer edge or leaning over the edge of the platform to turn the windlass.

Having described my invention, what I claim as new is—

1. The herein-described scaffold, comprising a platform, suspension-frames adapted to support said platform, stirrups projecting from said frames on line with said platform, side pieces resting on said stirrups, side rails removably secured to said suspension-frames above said side pieces, rearwardly-projecting arms having rollers mounted in their outer free ends, clamps for adjustably securing the inner ends of said arms to said platform, a windlass carried by each of said suspension-frames, and means for regulating the speed of rotation of said windlasses when said scaffold is being lowered, substantially as set forth.

2. The herein-described scaffold comprising a platform, suspension-frames adapted to support said platform, stirrups projecting from said frames on line with the platform, side pieces resting on said stirrups, a windlass carried by each of said suspension-frames, a drum mounted on the same shaft as said

windlass and adapted to revolve therewith, a strap secured at one end to said suspension-frame and encircling said drum, a lever pivoted to said frame and connected to the free
5 end of said strap, and means for rotating said windlass, substantially as set forth.

In testimony whereof I have signed this

specification in the presence of two subscribing witnesses.

JOHANN SLADEK.

Witnesses:

GEORGE LADEWICH,
B. M. SCOTT.

(Here follow diagrams marked p.340 & 342)



340
No. 673,384.

Patented May 7, 1901.

C. J. CLARK.
MASON'S PLATFORM FOR BUILDINGS.

Application filed Nov. 18, 1900.

(No Model.)

2 Sheets—Sheet 1

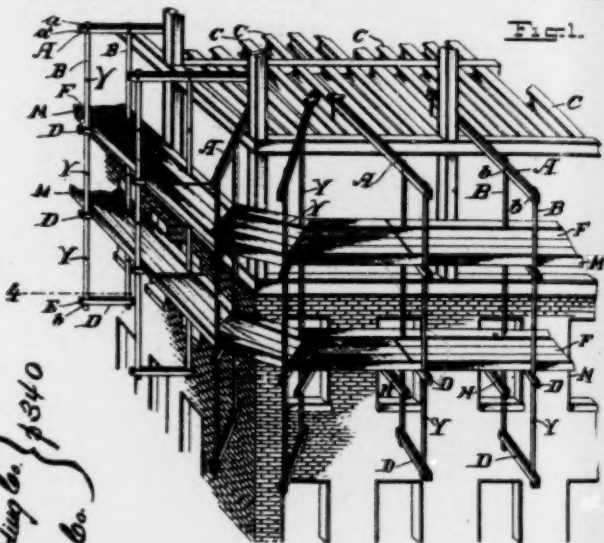


Fig. 1.

7/3.
Wm Scaffolding Co. } p 340
Cham & Co.

Fig. 3.

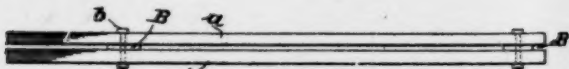
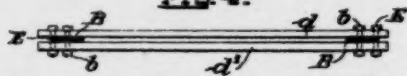


Fig. 4.



WITNESSES:

F. N. Roehm
W. H. Burroughs

INVENTOR,

Charles J. Clark,

BY

Butt, Rut, Shiffert & Co.
ATTORNEYS



No. 673,384.

Patented May 7, 1901.

C. J. CLARK.

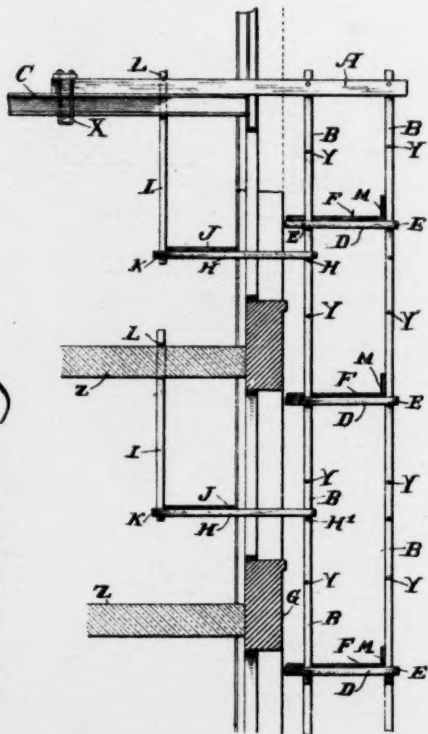
MASON'S PLATFORM FOR BUILDINGS.

(Application filed Nov. 15, 1900.)

(No Model.)

2 Sheets—Sheet 2

Fig. 2.



7/13
N.Y. Scaffoldng Co. } P 342.
Chain Belt Co.

WITNESSES:

F. N. Roehrich

W. H. Berrigan Jr

INVENTOR

Charles J. Clark

BY

BY
Betts, Betts, Shefferson & Betts
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES J. CLARK, OF NEW YORK, N. Y.

MASON'S PLATFORM FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 678,884, dated May 7, 1901.

Application filed November 14, 1900. Serial No. 34,558. (No model.)

to all whom it may concern:

Be it known that I, CHARLES J. CLARK, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful improvements in Masons' Platforms for Buildings, of which the following is a full and true description, reference being had to the accompanying drawings, showing a construction embodying my invention.

My invention relates to masons' platforms, and has for its object to provide a suspended platform of great strength which may be easily and quickly constructed and adjusted and which has many advantages when compared with the prior forms of platforms.

Prior to my invention so far as I am aware it has been the usual practice in building masons' platforms to build a framework at each floor within the house and to secure to the framework by nails, cleats, or otherwise beams extending outwardly and to place a temporary platform upon the beams outside of the building. In order to allow the masons to continue working up the building, it was necessary to build a framework at each floor and to have beams extend outwardly from each floor, thus requiring the employment of a large quantity of lumber and being very costly. As one result of this system also it was necessary to build the brickwork around the projecting beams, and when the beams had been withdrawn large openings were left in the walls, and to subsequently fill these openings cost considerable time and money. It was also necessary for the masons to build auxiliary platforms resting upon the main platform, supporting the same upon movable frames or "horses." This resulted in a further cost and delayed the work.

By the employment of my new platform I render the inside supporting-frames unnecessary and use but a single set of outrigger-beams for a plurality of independently-adjustable platforms, keeping the beams always above the work (there being no openings to be subsequently filled in the walls) and the several platforms or the entire frame being adapted to be quickly raised, lowered, taken apart, or assembled.

Referring to the accompanying drawings, Figure 1 shows several of my platforms se-

cured to a building in course of erection. Fig. 2 is a sectional view of the building, showing the manner of securing a platform in place. Fig. 3 is a top view of parts of the outriggers, showing manner of securing the depending bars; and Fig. 4 is a top view on line 3 of Fig. 1 of a put-lock for holding the bars in place and supporting a platform.

The new structure is composed, essentially, of outriggers A, depending bars B, secured to and spaced apart by the outriggers, and of put-locks D, bolted to and giving rigidity to the bars B and adapted to support the movable platforms.

The outriggers may with safety and economy be constructed, as shown, of two beams *a* and *a'*, laid on edge and secured at their inner ends to the building—say to the floor-beams C—by means of clamps or yokes X, (see Fig. 2,) and the depending bars B can be secured to the outriggers by means of bolts or pins *b*, passing through openings in the outriggers and in the bars.

The bars B (which may be in continuous lengths or bolted together in sections) are provided with openings Y at various points throughout their length, and the put-locks D are secured to the bars by bolts or pins fitted in the openings of the bars underneath the put-locks and by bolts E or other devices at the ends of the put-locks and outside of the bars. By this arrangement the put-locks may be quickly and readily raised without moving the bars, while the outer fastenings E prevent shifting of the put-locks and impart rigidity to the structure. As shown, the put-locks D are made up of two short beams *d* and *d'*; but any other form may be used.

The working platforms may be made up of loose boards F, resting upon the put-locks, and, as shown in the drawings, two or more platforms may be suspended simultaneously from the outriggers. Laborers may therefore be engaged in building the upper platform while the masons are at work on the lower or intermediate stage, and each platform may be shifted along its supporting-bars independently of another platform, and when work is completed at one platform the platform may be quickly taken apart without disturbing the masons at work above. The upper platform serves as a protection for

the masons below it against falling pieces of iron, tools, or hot rivets when the riggers and framers are at work on the higher floors. My new construction also permits the workmen to continue during windy and wet weather. The upper platform will protect the men from rain and snow, and they may be protected from the wind by securing strips of canvas outside of the rods.

10 The inner ends of the put-locks D rest against the building G and assist in bracing the suspended structure, while any suitable means may be availed of to prevent the structure swinging away from the building. For this purpose, however, I prefer to use one or more inner frames made up of iron bars H and I, the bars H supporting inner platforms J, which may be used by masons, lathers, or other workmen. The bars are secured at 20 their upper ends by bolts L to floor-beams, and the rod H is held to the bar I and the inner bar B by bolts or pins in substantially the same way that the put-locks are supported by the bars B. The rods H are arranged to project from the building at the places where windows are to be located.

In order to prevent bricks, &c., falling from the platforms, the boards M are set on edge against the outer bars B.

30 As before stated, with the prior forms of platforms it was necessary to build auxiliary platforms upon frames or horses resting on the main platforms. By my construction, however the masons can raise the platform as desired and without the use of auxiliary frames or horses.

The arrangement and combination of parts described by me and shown in the drawings is preferred by me and has been found highly useful; but other forms and arrangements may be employed without departing from my invention.

What I claim, and desire to secure, is—

1. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with bars, outside of the building, suspended from and secured in pairs to each of the outriggers, each pair of bars being spaced apart by one or more supports fitted thereto by means which permit the supports to be secured at different points along the bars, and a platform fitted between the suspended frames and resting upon the movable supports, substantially as and for the purpose described.

2. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with bars, outside of the building, suspended from and secured in pairs to each of the outriggers, each pair of bars being

spaced apart by suitable means, and a platform fitted between the suspended frames by means which permit it to be secured to the bars at different points along their heights, substantially as and for the purpose described.

3. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with bars, outside of the building, suspended from and secured in pairs to each of the outriggers, each pair of bars being spaced apart by suitable means, and a plurality of platforms fitted between the suspended frames by means which permit each platform to be independently secured to the bars at different points along their heights, substantially as and for the purpose described.

4. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with a rectangular frame suspended from each of the outriggers, one or more supports fitted between the bars of each frame by means which permit the supports to be secured at different points along the bars, and a platform fitted between the suspended frames and resting upon the movable supports, substantially as and for the purpose described.

5. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with a rectangular frame suspended from each of the outriggers, and a platform fitted between the suspended frames by means which permit it to be secured to the bars of both frames at different points along their heights, substantially as and for the purpose described.

6. The combination, in a mason's platform, of a pair of outriggers spaced apart and secured at their inner ends to the beams of a building, with bars, outside of the building, suspended from and secured in pairs to each of the outriggers, all of said bars being provided with openings at different points along their heights, each pair of bars being spaced apart by put-locks fitting between the opposite bars and having ends which embrace the bars, bolts for securing the put-locks to the bars and passing through openings in said bars, and a platform fitted between the suspended frames and resting upon the put-locks, substantially as and for the purpose described.

In witness whereof I have hereunto signed my name this 8th day of November, 1900.

CHAS. J. CLARK.

In presence of—

W. E. KINGMAN,
Wm. H. REKKEGAN, Jr.

(Here follow diagrams marked p.346,348 350)



146
No. 763,274.

PATENTED JUNE 21, 1904

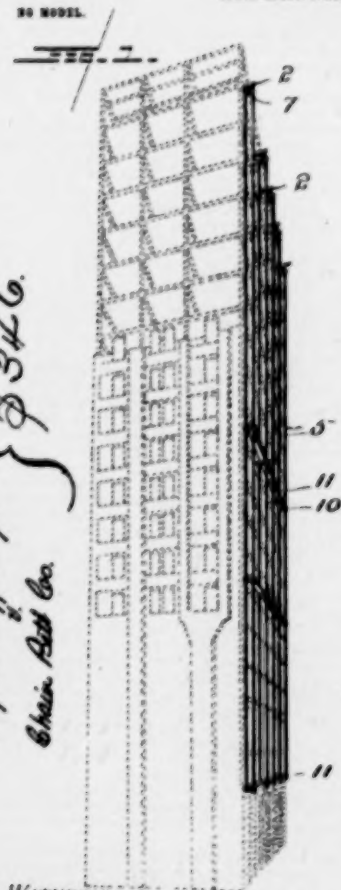
G. FOSTER.
SCAFFOLD.

APPLICATION FILED MAR. 18, 1903.

NO MODEL.

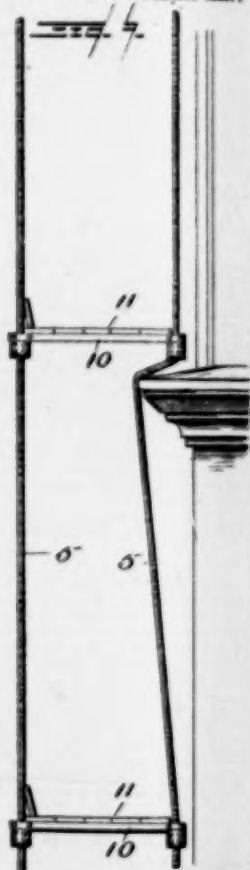
3 SHEETS-SHEET 1

4/3.
New York Scaffolding Co.
Chain Belt Co.



WITNESSES

H. F. Doyle.
Geo. B. Pittet.



INVENTOR

Calvin Foster.
BY *G. S. Parker*
Attorney



348
No. 763,274.

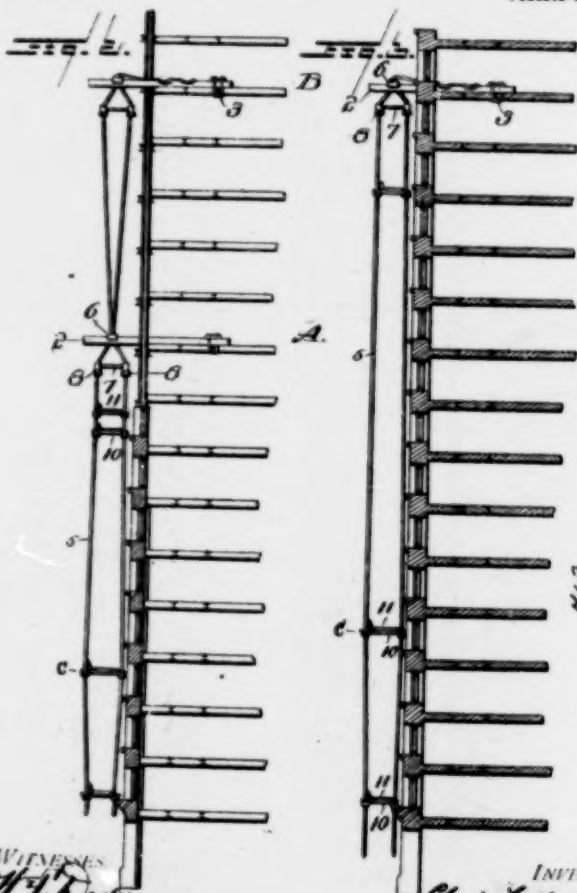
PATENTED JUNE 21, 1904.

C. FOSTER.
SCAFFOLD.

APPLICATION FILED MAR. 19, 1903.

NO MODEL.

3 SHEETS-SHEET 1

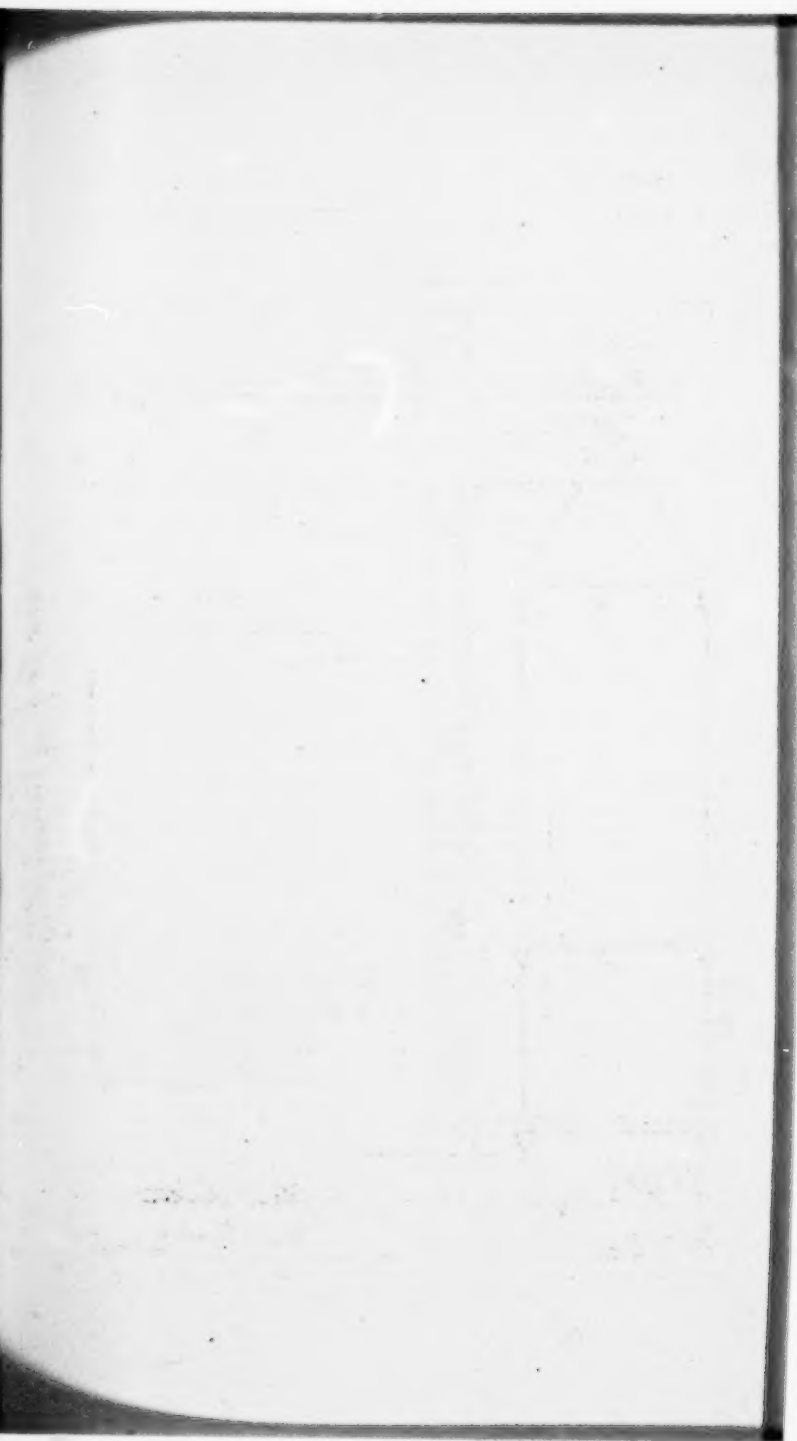


WITNESSES
H. F. Doyle
Geo. B. Pitts.

B1

INVENTOR
Clara Foster
J. S. Parker
Attorney

7/3
New York Scaffolding Co.
Chain Bolt Co.
P. 348.



350

No. 763,274.

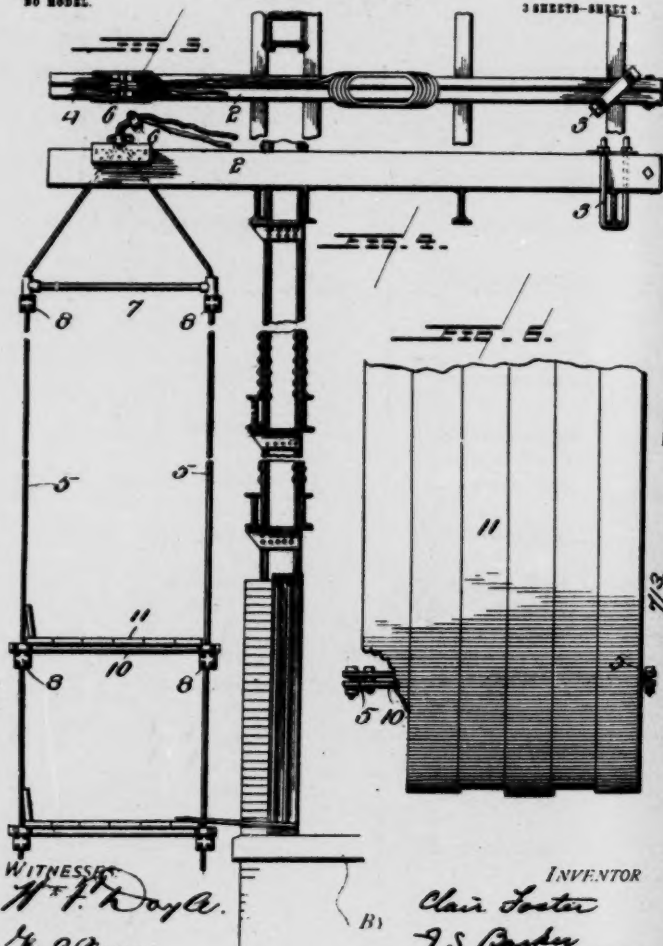
PATENTED JUNE 21, 1904.

C. FOSTER.
SCAFFOLD.

APPLICATION FILED MAR. 18, 1903.

NO MODEL.

3 SHEETS-SHEET 1.



WITNESSES
H. F. Doyle.
Geo. B. Chittie.

INVENTOR
Clair Foster
J. S. Parker
Law Attorney.

7/12
Mey Scaffolding Co. of 350.

UNITED STATES PATENT OFFICE.

CLAIR FOSTER, OF DOUGLSTON, NEW YORK.

SCAFFOLD.

SPECIFICATION forming part of Letters Patent No. 763,974, dated June 21, 1904.

Application filed March 18, 1903. Serial No. 148,337. (No model.)

To all whom it may concern:

Be it known that I, CLAIR FOSTER, a citizen of the United States, residing at Douglaston, borough of Queens, in the county of Queens and State of New York, have invented a new and useful Scaffold, of which the following is a specification.

My invention relates to a mason's platform or scaffold, and has for its object to produce, 10 a scaffold that is particularly adapted for use in the construction of the modern steel-frame type of buildings of great height. In the construction of such buildings it is customary and often very desirable after the steel frame is erected to start the masonry at two or three 15 different levels simultaneously, and heretofore it has been necessary when this is done to set up scaffolds for each part of the masonry construction.

One of the objects of my invention is to produce a scaffold the supports of which are of such character as to sustain and to be used for 20 as many platforms as may be necessary and to so construct and set up such supports as to make it unnecessary to shift them during the entire construction of the building.

The invention has other advantages, which will be hereinafter set forth.

In the accompanying drawings, Figure 1 is 30 a perspective view of a steel-frame building in the course of construction having my improvements in scaffolds applied thereto. Fig. 2 is a sectional elevation of a building in the course of construction with my invention ap- 35 plied thereto. Fig. 3 is a view similar to Fig. 2, showing the same building farther advanced toward completion, illustrating my invention. Fig. 4 is an enlarged side view showing my invention. Fig. 5 is a top plan view of the 40 parts represented in Fig. 4. Fig. 6 is a horizontal sectional view taken immediately above one of the floorings, part of the latter being broken away. Fig. 7 is an elevation of a short section of the scaffold, illustrating how it may 45 be carried past a projecting cornice of a building.

The scaffold in which my invention is embodied comprises a set of outriggers, a set of flexible platform-suspending means, preferably 50 steel cables, carried by the outriggers,

and platforms suitably supported by and vertically adjustable upon the suspending-cables.

In the accompanying drawings, 22 designate outriggers. These may be of any usual or preferred construction. As shown, they 55 consist of beams securely bolted to the steel-frame structure of the building, as by means of the clamps 3. These beams project out from the structure and at their outer ends are perforated, as at 4, for the passage of the 60 steel cables 55. I prefer that the outriggers should be arranged as high up as is convenient. Ordinarily they are arranged near the top of the steel-frame structure, though 65 sometimes they may be arranged at a lower level, as is represented in Fig. 2, and this is particularly the case when it is desirable to begin the masonry-work before the steel frame is entirely erected.

As represented in the drawings, each of the 70 outrigger-beams 2 supports a pair of steel cables 5, and the latter are preferably connected to each other above the outrigger by clamps 6. These hold the two cables together and rest upon the beam, operating, in conjunction 75 with the outriggers, as supporting means for the cables. Additional means for uniting the cables to the outriggers and for suspending them may be used, if found desirable. The cables of each pair are held apart by a spacing-bar 7. This is preferably arranged close 80 to the outrigger and is held in place by the clamps 8, secured, respectively, to the cables. The spacing-bar is preferably provided at its ends with eyes through which the cables pass 85 and is free to be adjusted longitudinally of the cables. The cables are of a length to extend downward from the outriggers to or below the lowest level at which it may be desirable to support a platform.

10 10 represent the putlogs, upon which the flooring 11 rests and is supported. These putlogs may be of any usual or preferred construction; but I prefer that they should be adjustable vertically along the supporting-cables 5. They may be similar in construction 95 to the spacing-bars 7, or they may be formed of two cross-bars arranged side by side, as shown in Fig. 6, bolted together, the cables being confined between the bars and bolts. 100

These putlogs may be adjusted with the utmost nicety, being held in place upon the cables by means of clamps 8, applied to the cables, upon which clamps the putlogs rest.

5 In Fig. 1 the scaffold is represented as being supported from outriggers arranged near the top of the steel-frame structure. Upon the cables suspended from the outriggers are represented three platforms—one opposite the
10 third story, another opposite the eighth story, and a third opposite the twelfth story. It will be observed that these three platforms are all supported from the same cables and also that each platform is quite independent of the
15 others and may be adjusted up or down without reference to the other platforms, or any platform may be entirely removed without interfering with the others.

In Fig. 2 I have illustrated an advantage
20 that is incident to my invention and which is quite novel in the art. As already stated, it is sometimes desirable to rig the scaffold before the steel frame of the building is entirely erected, and in this figure it is represented
25 that this has been done, the outriggers at A being located at the eleventh floor of a sixteen-story structure. This permits the masonry-work to be started at any of the floors below the eleventh while the upper part of the steel structure is being completed. When
30 this is done, the cables are connected with the outriggers at A at points intermediate their length, sufficient of the cable being reserved to extend to the top of the structure, and this
35 is coiled up, as represented in Figs. 2, 3, and 4. When the frame structure is completed, the portions of the cables above the outriggers A are carried up and secured to a set of outriggers near the top of the frame, as indicated
40 at B. This can be done without interfering with the supports for the cables at A and without interfering in any wise with the use of the scaffold. After the cables are properly secured to the outriggers at the level B
45 they are preferably released from the outriggers at the level A, and these are entirely removed, as indicated in Fig. 3.

In Fig. 7 I have represented how a scaffold made according to my invention may be carried
50 past a cornice projecting out so far beyond the face of the building as to be in the way of the inner cables 5. By reason of the flexibility of the cables and of the putlogs being mounted freely thereupon one set of the
55 cables may be deflected to pass the obstruction without destroying the continuity of the scaffold, while the platforms both above and below such deflection may be adjusted and arranged as desired.

60 After the masonry-work has been completed and the outside of the structure is practically finished it is necessary to clean and point up the work. It has heretofore been necessary to rig a special scaffold for the work-
65 men employed for this purpose. In using my

invention, however, this is not required, as the cables are left after the masonry-work is completed and may be used to support the platforms on which the workmen who do this finishing-work stand.

I am aware that platforms for workmen have been suspended by flexible cables from the roofs or upper portions of structures; but heretofore, so far as I am aware, in such cases
75 ropes have been employed for this purpose and the platforms were adjusted by block-and-tackle contrivances about which the ropes pass. This has rendered it impossible to support more than a single platform from one set of suspending-cables. I am also aware that
80 it has been proposed to support a plurality of platforms for masons' use upon metal bars suspended from outriggers; but it will be readily understood that such a scaffold must necessarily be quite limited in size, both on
85 account of the impracticability of using excessively-long metal bars and because of the great weight which would be incident to a scaffold of this kind arranged to extend to more than three or four stories in vertical
90 dimensions.

I believe that I am the first to devise a continuous scaffold that may be extended upward
95 above the point of support to a higher support, also to devise a scaffold having flexible suspending means upon which may be supported a plurality of platforms independently adjustable, and also to have combined the suspending-cables, putlogs for the flooring of the
100 platforms, and rope or cable clamps adjustable upon the cables for supporting the putlogs.

If it be found desirable at any time to use a platform of unusual width, this is quite feasible,
105 as represented in Figs. 2 and 3 at C. Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a scaffold, the combination of a set of outriggers, supporting-cables suspended
110 therefrom, putlogs adjustable vertically along the said cables, and clamps arranged to be secured to the cables upon which the putlogs rest, substantially as set forth.

2. In a scaffold, the combination of a set
115 of flexible cables, platforms supported thereby, outriggers from which the cables are suspended, and means for making the cables fast to the said outriggers at points between their ends, the upper portions of the cables extending
120 beyond the outriggers, whereby such portions are arranged to be continued upward and suitably supported without interfering with the platforms below such outriggers, substantially as set forth.

3. In a scaffold, the combination of a series of outriggers, a series of flexible cables rigidly connected to and suspended from the outriggers, spacing-bars for holding the cables
125 apart, adjustable clamps adapted to be secured

to the cables, putlogs resting upon said clamps, and flooring supported on the putlogs, substantially as set forth.

4. In a scaffold, the combination of a series of outriggers, a series of pairs of cables supported therefrom, means for connecting the cables of each pair to each other and to their supporting-outrigger, means for holding the cables apart, putlogs adjustably connected with the cables, and the platforms resting on the putlogs.

5. In a scaffold, the combination of a set

of outriggers, flexible supporting means suspended therefrom, and flooring connected with the flexible supporting means between the lower ends thereof and the outriggers, the flexibility of the suspending means permitting them to be deflected at points intermediate their upper and lower ends without destroying their continuity, substantially as set forth.

CLAIR FOSTER.

Witnesses:

A. MCGONAGLE,
L. J. MORRIS.

(Here follow diagrams marked p.356 & 358)

356

No. 783,884.

PATENTED JUNE 28, 1904.

L. H. & T. H. HARPIN.

SCAFFOLD.

APPLICATION FILED APR. 9, 1904.

NO MODEL.

3 SHEETS—SHEET 1.

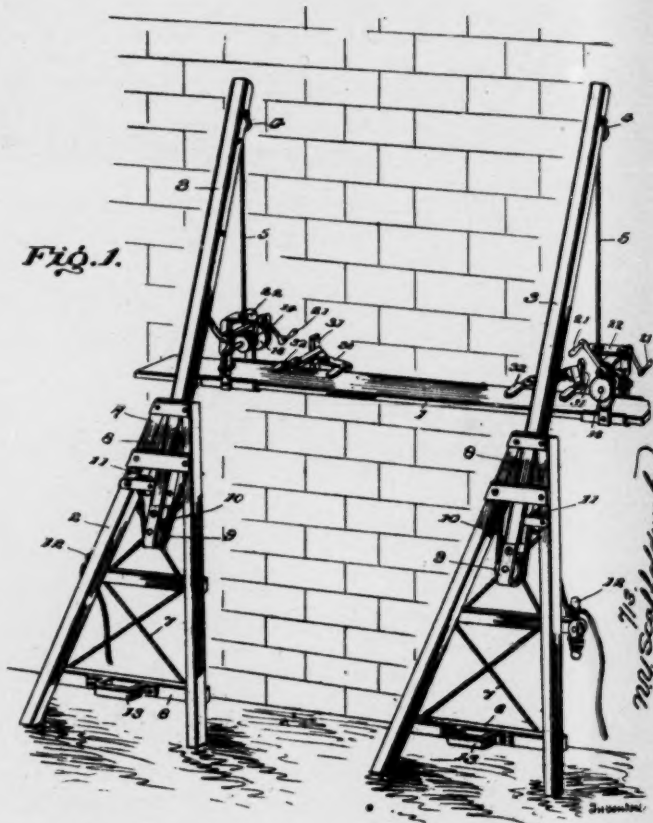


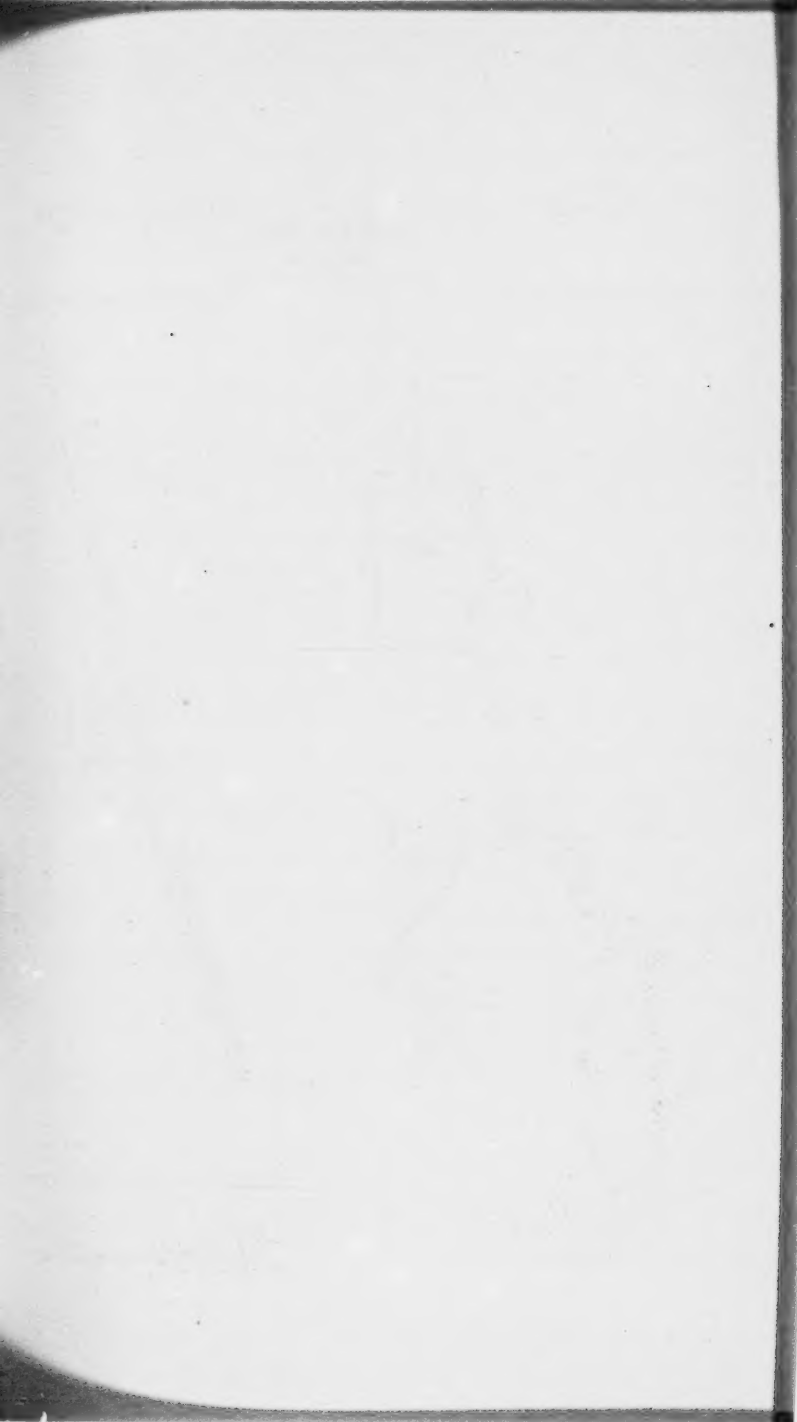
Fig. 1.

Witness
John W. Woodson
 W. H. Woodson.

L. H. Harpin and T. H. Harpin.

25, *Pharney*, Attorney

My Scaffolding Co. 1896



358
No. 763,884.

PATENTED JUNE 28, 1904.

L. H. & T. H. HARPIN.
SCAFFOLD.

APPLICATION FILED APR. 9, 1904.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 3.

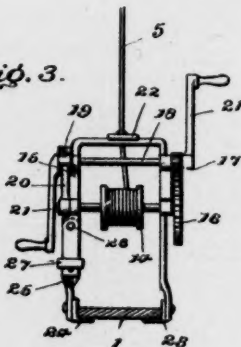


Fig. 2.

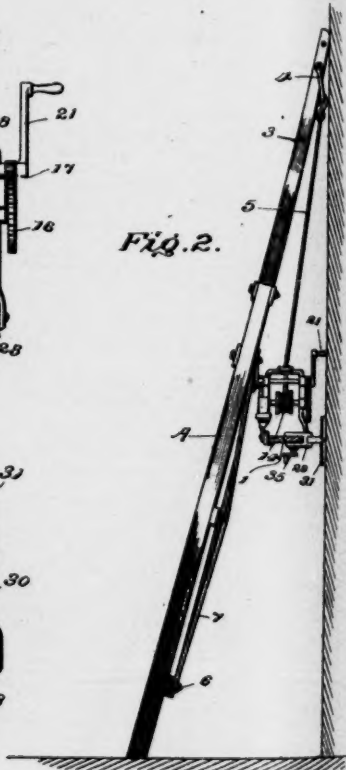
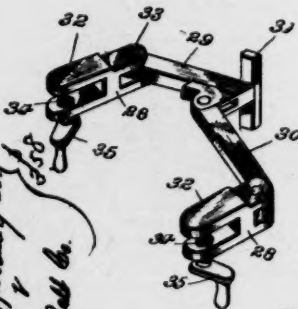


Fig. 4.



7/2
New Scaffolding Co.
Chain Belt Co.

Witness

[Signature]
H. H. Hudson

Inventor

L. H. Harpin and T. H. Harpin

By *[Signature]*
R. H. Roney, Attorney

UNITED STATES PATENT OFFICE.

LOUIS H. HARPIN AND THEOPHILE H. HARPIN, OF KANKAKEE, ILLINOIS.

SCAFFOLD.

SPECIFICATION forming part of Letters Patent No. 763,884, dated June 28, 1904.

Application filed April 9, 1904. Serial No. 202,418. (No model.)

To all whom it may concern:

Be it known that we, LOUIS H. HARPIN and THEOPHILE H. HARPIN, citizens of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Scaffolds, of which the following is a specification.

This invention has relation to scaffolding or staging for the use of mechanics to enable them to reach the side of a wall for painting, pointing up joints, or other purpose requiring an appliance of this character.

The purpose of this invention is to provide a novel form of staging which may be easily and conveniently handled and adapted to be manipulated by one person and which is safe, adjustable, and easily manipulated from the platform.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a staging embodying the invention. Fig. 2 is a side view thereof, showing the platform in section.

Fig. 3 is a detail view of the windlass, its frame, and adjunctive parts, showing the platform or stage in section. Fig. 4 is a detail perspective view of the spacing and steadying device applied to the platform or stage.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The scaffold or staging comprises standards A, a platform or stage 1, and hoisting and adjusting tackle. The standards A are of similar construction, each comprising a base 2 and a pole 3, the latter being slidable and adjustable with reference to the base and provided near its upper end with a link 4, to which the upper end of the hoisting-rope 5 is

attached. The base 2 comprises side members or bars oppositely inclined and connected by cross-pieces 6 and strengthened by brace-rods 7, running from one side to the other and crossing intermediate of the transverse ties 6. The pole 3 is slidable between the side members or bars of the base 2 and is held from lateral displacement by means of the upper cross piece or tie 6 and blocks 8, secured to the inner faces of the side bars. A sheave-pulley 9 is provided at the lower end of the pole 3. An operating rope or cord 10 is secured at one end to a side bar and passes around the sheave-pulley 9, thence over a guide-pulley 11, fitted to the opposite side bar, and extends within convenient reach of the ground and is adapted to be made fast to a cross piece or hitch 12. A loop or keeper 13 is applied to the lower cross piece or tie 6 and receives the lower end of the pole 3 when the latter is telescoped into the base 2.

The platform or stage 1 is provided near each end with a windlass and a spacing and steadying device. The windlass is indicated at 14 and is journaled to the side members of a frame 15 of approximately U form. A gear-wheel 16 is secured to the projecting end of the shaft supporting the windlass 14 and is in mesh with a pinion 17, secured to a shaft 18, journaled to the side members of the frame 15 and provided with a ratchet-wheel 19, with which a pawl 20 cooperates to hold the windlass against backward rotation, thereby preventing the rope 5 unwinding therefrom, so as to hold the platform or stage 1 at the required elevation. A crank 21 is fitted to each end of the shaft 18 for convenience of operation when it is required to raise or lower the platform. An arm 22 projects from the upper cross-piece of the frame 15 and is apertured for the rope 5 to pass through, thereby holding said rope central and preventing tilting of the platform to one side or the other. A jaw 23 is secured to the lower end of a side member of the frame 15, and a companion jaw 24 is attached to an arm 25, pivoted at its upper end to the opposite side member at 26. A band 27 is slidable upon the arm 25 and overlays a portion of the side member of the frame 15 and is adapted to hold the arm 25

rigid when the platform or stage 1 is received between the jaws 23 and 24. The jaws 23 and 24 are of similar formation, being lengths of angle-bars which have a wing underlapping the platform and a wing engaging with the edge of said platform.

After the standards have been placed against the side of the wall and the ropes 5 are hooked or otherwise attached to the loops 4 and the platform or stage connected to the frames 15 the latter may be elevated to the desired position by operating the shafts 18, which will effect a corresponding rotation of the windlams, so as either to wind the rope thereon to elevate the platform or unwind the rope therefrom to lower the platform. When the platform has been moved to the required position, it is made secure by engaging the pawl 20 with the teeth of the ratchet-wheels 19.

The means for spacing and steadying the platform comprise clips 28, toggle-links 29 and 30, and rests 31. The clips 28 are of like formation, each consisting of a clamp 32, having spaced ears 33, between which the ends of the respective toggle-levers 29 and 30 are pivoted. The binding-screw 34, threaded into a member of the clamp, is provided with a crank 35 for convenience of manipulation. The clamp is secured to the edge portion of the platform or stage 1 in the well-known manner, and by varying the space between the clips 28 of each spacing device the rest 31 may be projected to a greater or less distance from the edge of the platform, so as to hold the latter a corresponding distance away from the wall to be reached. The rest 31 consists of a vertical bar and extends above and below the plane of the toggle-links 29 and 30, so as to hold the platform steady and prevent

any possible tilting thereof even though a preponderance of weight should come upon one side or the other of a longitudinal medial line.

Having thus described the invention, what is claimed as new is—

1. In staging, the combination of a platform, a frame comprising side members, a jaw attached to one of said side members, an arm pivoted to the opposite side member and provided with a companion jaw, and means for securing the pivoted arm to hold the jaws in engagement with the platform, substantially as set forth.

2. In staging, and in combination with the platform and suspending means therefor, a vertically-disposed rest, toggle-links having the rest attached thereto, and means for adjustably connecting the toggle-links to the platform, substantially as set forth.

3. In staging, and in combination with the platform and suspending means therefor, clips having adjustable connection with the platform, toggle-links pivotally connected to said clips, and a rest supported by the toggle-links for properly spacing the platform from the wall, substantially as described.

4. In staging, and in combination with the platform and suspending means therefor, clips comprising clamps and ears, toggle-links pivoted to said ears, and a rest connected to the toggle-links and projected from opposite sides of the plane thereof, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LOUIS H. HARPIN. [L. S.]
THEOPHILE H. HARPIN. [L. S.]

Witnesses:
EMILE GONDREAU,
J. H. MERRILL.

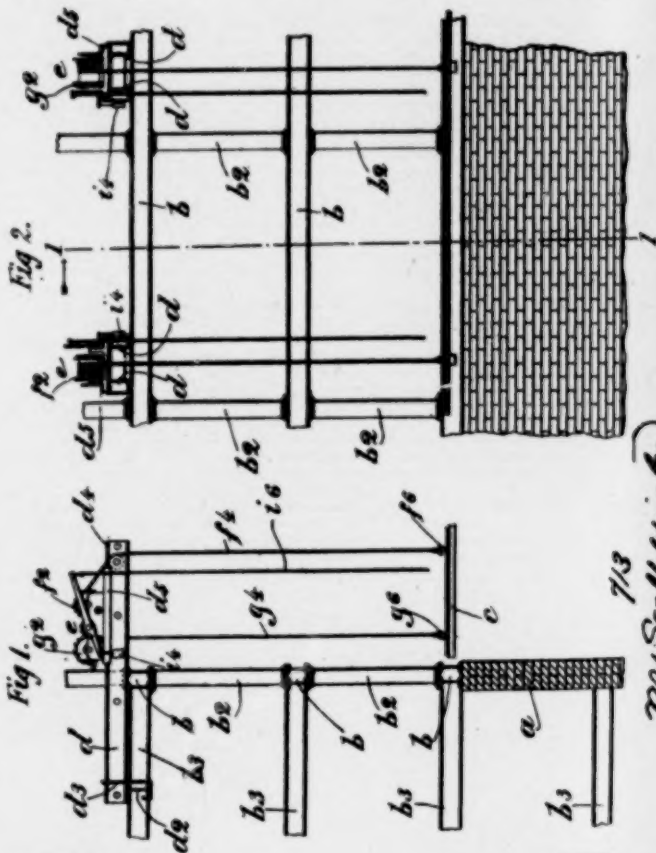
(Here follow diagrams marked p.362 & 364)



W. J. MURRAY.
SCAFFOLD SUPPORT.
APPLICATION FILED MAR. 7, 1904.

NO MODEL.

2 SHEETS-SHEET 1.



WITNESSES
C. E. Mulhearn
J. A. Stewart

INVENTOR
William J. Murray.
Edgar & Co

ATTORNEYS

7/13
W. J. Murray Co.
p. 362
C. E. Mulhearn



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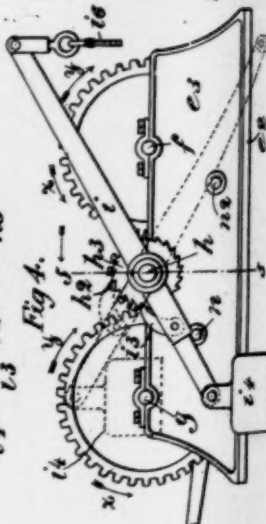
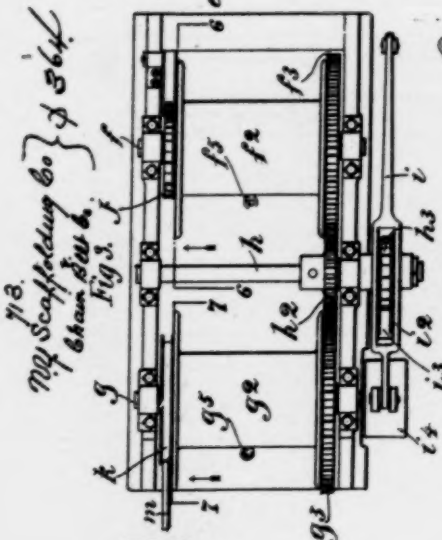
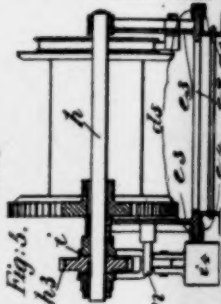
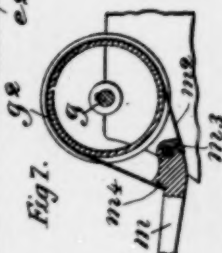
No. 769,395.

PATENTED SEPT. 6, 1904.

W. J. MURRAY.
SCAFFOLD SUPPORT.
APPLICATION FILED MAR. 7, 1904.

NO MODEL.

2 SHEETS-SHEET 1.



713.
Mey Scaffolding Co. } \$ 364
Chambers St. N.Y.

WITNESSES
C. E. Mulhany
F. A. Stewart

INVENTOR
William J. Murray
Edgar & Pate
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM J. MURRAY, OF NEW YORK, N. Y.

SCAFFOLD-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 709,395, dated September 6, 1904.

Application filed March 7, 1904. Serial No. 196,895. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Scaffold-Supports, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to supports for scaffolds used in the construction of steel or iron frame buildings, and particularly in building or filling in the walls of such buildings after the framework has been completed; and the object of the invention is to provide improved supports for scaffolds of this class and improved means for raising and lowering such scaffolds, and particularly for raising the scaffolds; and with these and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a vertical section on the line 1 1 of Fig. 2; Fig. 2, a front view of a part of the wall of a building provided with my improved scaffold-supports, two of which are shown; Fig. 3, a plan view of one of my improved scaffold-supports; Fig. 4, a side view thereof; Fig. 5, a section on the line 5 5 of Fig. 4; Fig. 6, a section on the line 6 6 of Fig. 3, and Fig. 7 a section on the line 7 7 of Fig. 3.

In the drawings forming part of this specification, reference being made to Figs. 1 and 2 of the drawings, I have shown at *a* a part of one of the walls of a building, said wall being built around and inclosing the usual steel or iron framework composed of horizontally-arranged beams *b* and vertical columns *c*. The framework is also provided with horizontally-arranged beams *b'*, placed at right angles to the beams *b*, and in filling in or building up the wall or walls *a* it is cus-

tomary to provide a scaffold *c*, which must be raised, of course, as the wall is raised or the building thereof progresses.

In the practice of my invention I provide supporting-beams *d*, which in the form of construction shown are placed transversely of the top wall beam or beams *b* and the inner ends of which are connected with supplemental beams *d'*, arranged transversely to the beams *b'* by means of the yokes or other locking devices *d''*, and on the front projecting ends of the beams *d* are placed my improved scaffold-supports *e*. The beams *d* are arranged in pairs, as shown in Fig. 2, and in the construction of the supports *e*, one of which is mounted on each pair of the beams *d*, I provide a frame comprising a base *e'* and side members *e''* and in the form of construction shown the base *e'* is provided with side flanges *e'''*, which are secured to the flanges *d'* of the beams *d* by keepers *d''* or in any desired manner, and the beams *d* in the form of construction shown are U-shaped in cross-section and said beams are so placed that the flanges thereof project outwardly at the top and bottom thereof; but the supports *e* may be connected with the beams *d* in any desired manner, and said beams may be of any preferred form. The base *e'* of the framework of the supports *e* is open, and mounted in the side members *e''* of said frame or at the tops thereof are two transverse shafts *f* and *g* and a central shaft *h*. The shaft *f* is provided with a drum *f'*, which is secured thereto, and the shaft *g* is provided with a drum *g'*, which is secured thereto, and the shaft *h* is provided with a small gear-wheel or pinion *h'*, which meshes with large gear-wheels *f''* and *g''* at the ends of the drums *f'* and *g'* and secured to said drums or to the shafts *f* and *g*. The drums *f'* and *g'* are also provided with cables *f'''* and *g'''*, which are secured thereto, preferably by means of eyes *f''''* and *g''''*, with which said drums are provided, and these cables support the scaffold *c* in the usual manner, being connected therewith at *f'''* and *g'''*.

In the form of construction shown two of the supports *e* are employed; but it will be understood that any desired number of said

supports may be employed, according to the length of the scaffold *c*. One end of the shaft *A* is also provided with a ratchet-wheel *A'*, and mounted on said shaft and free to turn thereon is a lever-arm *i*, having a longitudinal slot or opening *i'*, through which the ratchet-wheel *A'* passes, and said lever-arm is provided at one end of the slot or opening *i'* with a pawl *i''*, which operates in connection with the ratchet *A'*, and said end of said lever-arm is also provided with a weight *i'''*, and connected with the other end thereof is a cord, rope, or cable *j*, which extends down to the scaffold *c*, and a downward pull on the cords *j* of each of the supports *c* will result in turning the shaft *A* of each of said supports and in the turning of the drums *f* and *g*, so as to wind the cables *f* and *g* thereon and the consequent raising of the scaffold *c*. At the end of each pull on the cords or ropes *j* the weight *i'''* depresses the rear ends of the lever-arms *i* and raises the front ends thereof, and another pull on the cords or ropes *j* will result, as above stated, in winding the cables *f* and *g* on the drums *f* and *g*, and this operation may be repeated until the scaffold is raised to the desired point.

The drum *f* in the form of construction shown is also provided at the end opposite the gear-wheel *f* with a ratchet-wheel *j*, and a pawl *j'* operates in connection therewith. The shaft *g* is provided at the end, thereof opposite the gear-wheel *g* with a brake-drum *k*, or this drum may be formed on or connected with the drum *g*, and the ratchet-wheel *j* may be formed on or connected with the drum *f*, and pivoted adjacent to the shaft *g* or, to the brake-drum *k* is a lever *m*, and secured to the end of said lever adjacent to said drum is a brake-band *n*, this connection being made at *m'*, and the band *n* is passed around the brake-drum *k* and connected with the lever *m* at *m''*, and a downward movement of the lever *m* will result in applying the brake-band *n*, so as to regulate the turning of the drum *g* in the downward movement of the scaffold, when it is desired to lower said scaffold. In this operation of lowering the scaffold the pawl *j'* must be turned backwardly, so that it will not engage the ratchet-wheel *j*, and it will be understood that the lowering of the scaffold must be manipulated from the top of the building or from the supports of the parts *c*, and in this operation the pawl *i''* must also be turned out of engagement with the ratchet-wheel *A'*. With the form of construction shown the drums *f* and *g* are turned in the direction of the arrows *x* in Fig. 4 when raising the scaffold, and when lowering the scaffold said drums are turned in the direction of the arrows *y*, and one side *o* of the framework of the support or supports *c* is provided with pins or stops *n* and *n'*, which limit the movement of the lever-arm *i*.

It will be understood that the supporting beams *d* may be placed at any desired point, and various changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages, and I reserve the right to make all such alterations therein as fairly come within the scope of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A scaffold-support, comprising a framework, two parallel drums mounted therein, a central shaft mounted between said drums and geared in connection therewith, a lever mounted on one end of said shaft and adapted to turn thereon, a ratchet secured to said shaft adjacent to said lever, a pawl connected with said lever and operating in connection with said ratchet, and means for operating said lever, substantially as shown and described.

2. A scaffold-support, comprising a framework, two parallel drums mounted therein, a central shaft mounted between said drums and geared in connection therewith, a lever mounted on one end of said shaft and adapted to turn thereon, a ratchet secured to said shaft adjacent to said lever, a pawl connected with said lever and operating in connection with said ratchet, and means for operating said lever, one of said drums being also provided at the end thereof opposite said lever with a brake, substantially as shown and described.

3. A scaffold-support, comprising a framework, two parallel drums mounted therein, a central shaft mounted between said drums and geared in connection therewith, a lever mounted on one end of said shaft and adapted to turn thereon, a ratchet secured to said shaft adjacent to said lever, a pawl connected with said lever and operating in connection with said ratchet, and means for operating said lever, one of said drums being also provided at the end thereof opposite said lever with a brake, and the other with a lock, substantially as shown and described.

4. A scaffold-support for steel-frame structures, comprising beams adapted to be connected with the frame so as to project therefrom, a frame adapted to rest on the projecting ends of said beams, two parallel drums mounted in said frame, a central shaft mounted between said drums and geared in connection therewith, means for turning said drums, and means for locking said drums, substantially as shown and described.

5. A scaffold-support for steel-frame structures, comprising beams adapted to be connected with the frame so as to project therefrom, a frame adapted to rest on the projecting end of said beams, two parallel drums mounted in said frame, a central shaft mounted between said drums and geared in connection

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sion therewith, means for turning said drums, means for locking said drums, and cables wound on said drums and adapted to support a scaffold, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in pres-

ence of the subscribing witnesses, this 5th day of March, 1904.

WILLIAM J. MURRAY.

Witnesses:

F. A. STEWART,

C. E. MULREANY.

(Here follows diagram marked p.370)

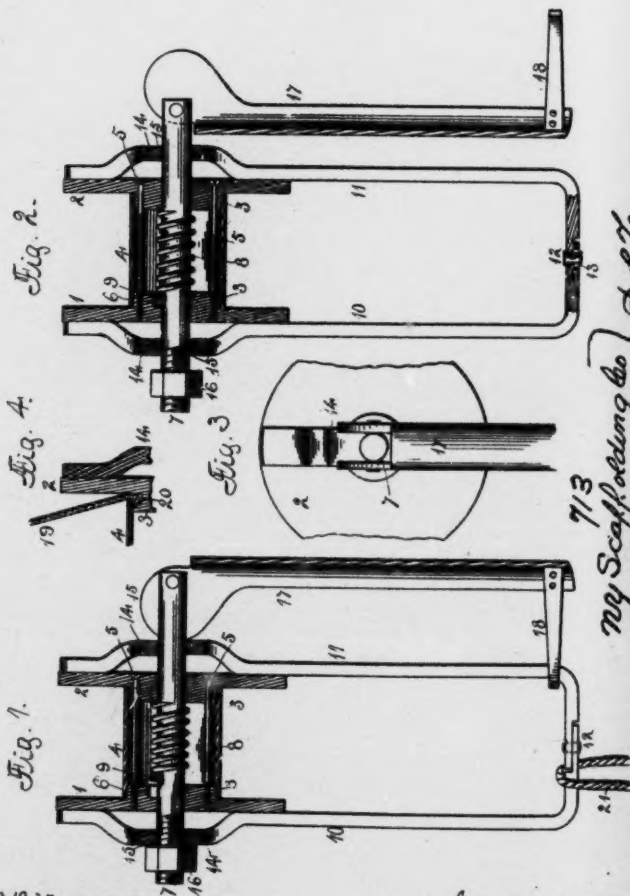
370
No. 775,704.

PATENTED NOV. 22, 1904.

O. B. HOWE.
FIRE ESCAPE.

APPLICATION FILED OCT. 18, 1903.

30 MODEL.



7/3
New Scaffolding Co. & 870
Cham. Bldg. Co.

Witnesses:
A. O. Behl
C. Behl

Inventor:
Orlando B. Howe
By A. O. Behl
att

UNITED STATES PATENT OFFICE.

ORLANDO B. HOWE, OF LANARK, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 775,704, dated November 22, 1904.

Application filed October 18, 1903. Serial No. 177,352. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO B. HOWE, a citizen of the United States, residing at Lanark, in the county of Carroll and State of Illinois, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

The object of this invention is to construct a fire-escape comprising a rotatable drum against the outer surfaces of which is applied friction in order that the drum may be allowed to rotate with more or less rapidity, according to the will of the operator.

In the accompanying drawings, Figure 1 is an elevation, partly in section, in which friction is applied to the drum. Fig. 2 is a similar elevation in which a positive connection is formed between the drum and cam-lever. Fig. 3 is a face representation of the drum. Fig. 4 is a section of the drum, showing the connection of the cable therewith.

The drum is composed of two heads 1 and 2, having central projections 3. A shell 4 is located outside of the projections and between the heads and is held in place by the screws 5, connecting the heads. The projection of the head 1 has a recess 6 for a purpose to appear hereinafter. Each head of the drum has a central opening, within which is located a shaft 7. A coiled spring 8 surrounds the shaft 7, one end resting against the projection 3 of the head 2 and its other end against a stud 9, extending from the shaft 7. A yoke comprises the sections 10 and 11, having a movable connection by means of the pin 12 and slot 13. The free end of the section of the yoke has a portion 14 bent out of a direct line with the side bars and has a hole 15 through said portion. The sections of the yoke are placed in connection with the shaft 7 before they are connected together. One end of the shaft 7 has a screw-threaded section, upon which is placed a nut 16. To the end of the shaft 7 is pivoted a cam-lever 17, having a hook 18 connected to its free end.

At Fig. 4 is shown the method of attaching the cable 19 to the drum. The projection 3 of the head 2 has a recess 20 therein, which is partly covered by the shell 4, and the knotted end of the cable is placed in the recess and

held from being drawn out by the shell. In use the hook of the cam-lever is placed in engagement with the branch 11 of the yoke, which will hold the cam-surface in contact with branch 11. By advancing the nut 16 on the shaft 7 the branches of the yoke will be held in contact with the outer faces of the drum, and the pressure applied can be varied by the nut, when the parts will appear as shown at Fig. 1. It will be noticed that the stud 9 on the shaft 7 is free of the recess 6. The fire-escape is now ready for use. The end of the cable 19 is fastened to the building and the rope 21 passed around the body of the person to be lowered. If the way is clear, no attention need be paid to the apparatus, as it was previously adjusted to the weight of the person to be lowered. In the descent the speed can be checked by pressing the free end of the cam-lever toward the yoke, which will increase the force exerted by the cam-surface against the yoke, and consequently against the drum. By moving the free end of the cam-lever away from the yoke the force exerted by the cam will be lessened, which will allow a quicker descent. By disengaging the cam-lever from the yoke it may be turned about into the position shown at Fig. 2, thereby acting as a crank by which the shaft may be revolved. The spring 8 will force the stud 9 into the recess 6, thereby forming a connection between the shaft and drum, and by revolving the shaft the cable can be wound upon the drum, and when the cam-lever is used to exert pressure on the drum the stud will be withdrawn from the recess, thereby breaking the connection between the shaft and drum. It will be noticed that each branch of the yoke bears upon one of the heads of the drum each side of its center, which allows the center portion 14 of the branch to yield, thereby imparting pressure to the drum more evenly.

I claim as my invention

1. In a fire-escape, the combination of a shaft, a drum mounted on the shaft, a cam-lever pivotally connected to one end of the shaft, a yoke supported by the shaft outside of the drum, the inner face of one of the heads of the drum provided with a recess, a projec-

100

tion on the shaft capable of entering the recess and a spring surrounding the shaft and located between the projection and the other head of the drum.

2. In a fire-escape, the combination of a shaft, a drum mounted on the shaft, a cam-lever pivotally connected to one end of the shaft, a nut having a screw-thread connection with the other end of the shaft, a yoke, the arms of which are mounted on the shaft between the cam-lever and drum and between the nut and drum and having points of en-

gagement with the drum near its periphery, leaving its center portion free of the drum, the inner face of one of the heads of the drum provided with a recess, a projection on the shaft capable of entering the recess, and a spring surrounding the shaft and located between the projection and the other head of the drum.

ORLANDO B. HOWE

Witnesses:

FRANK BUFFINGTON,
FRANK B. SPECK.

(Here follow diagrams marked p.374 & 376)

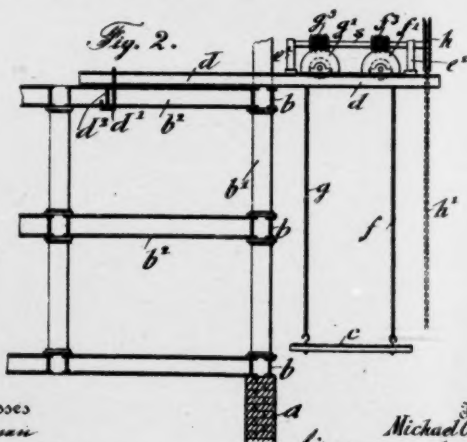
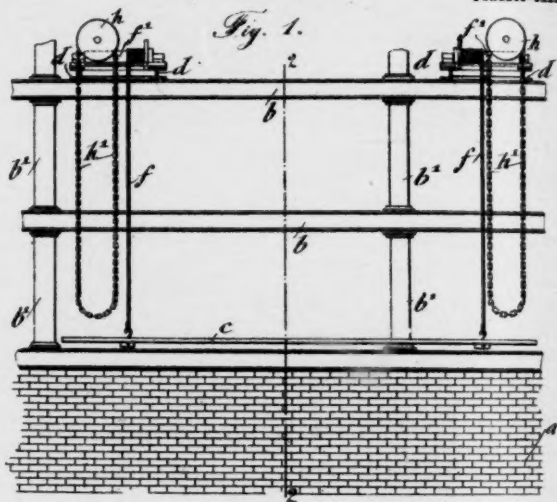


374
No. 796,807.

PATENTED AUG. 8, 1905

M. CAVANAGH.
SCAFFOLD SUPPORT.
APPLICATION FILED NOV. 22, 1904.

SHEET 1



7/3.
N.Y. Scaffolding Co. } \$ 374.
Chain Belt Co.

Witnesses
W. D. Bergman
H. B. B. B. B.

Inventor
Michael Cavanagh
By his Attorneys
G. A. K. K.



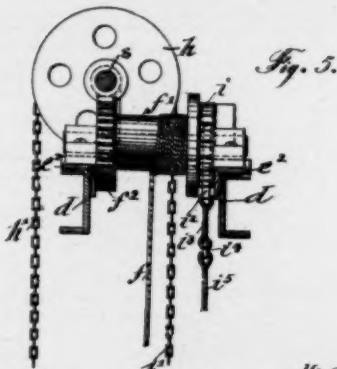
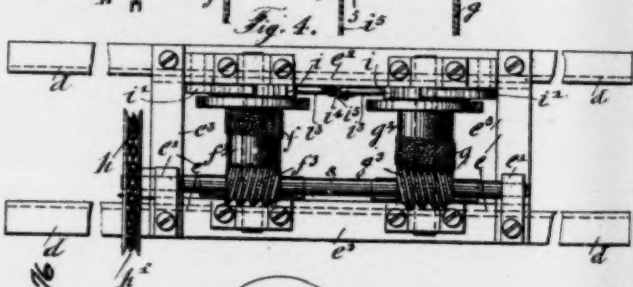
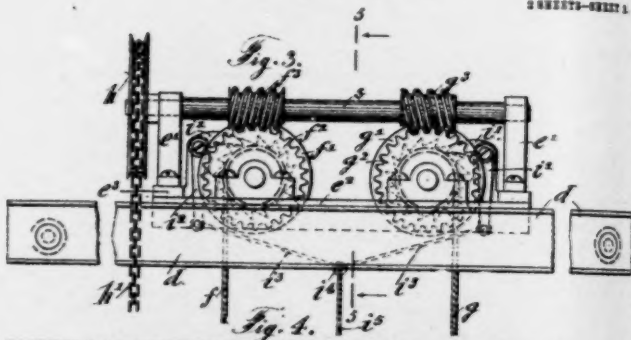
376

No. 796,807.

PATENTED AUG. 8, 1905.

M. CAVANAUGH.
SCAFFOLD SUPPORT.
APPLICATION FILED NOV. 22, 1904.

2 SHEETS-SHEET 1.



73.
W. J. Scaffolding Co. } 1376 d
Chain Bolt Co. }

Witnesses
H. J. Bayman
[Signature]

Inventor
Michael Cavanaugh
By his Attorneys
[Signature]

UNITED STATES PATENT OFFICE.

MICHAEL CAVANAGH, OF NEW YORK, N. Y.

SCAFFOLD-SUPPORT:

No. 798,807.

Specification of Letters Patent.

Patented Aug. 8, 1905.

Application filed November 22, 1904. Serial No. 335,811.

To all whom it may concern:

Be it known that I, MICHAEL CAVANAGH, a citizen of the United States, residing in New York, borough of Brooklyn, in the State of New York, have invented certain new and useful Improvements in Scaffold-Supports, of which the following is a specification.

This invention relates to certain improvements in the scaffold-support for which Letters Patent were granted to William J. Murray on September 6, 1904, No. 769,396, said improvements being designed with a view of remedying some of the defects of the scaffold-support referred to and to permit the quicker and more effective operation of the same when raising or lowering the scaffold; and for this purpose the invention consists in the novel features and combinations of parts, which will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a front view of a part of the wall of a building, showing my improved scaffold-support suspended from the steel or iron frame of the building. Fig. 2 is a vertical transverse section on line 2-2, Fig. 1. Fig. 3 is a side view of one of my improved scaffold-supports. Fig. 4 is a plan view of Fig. 3; and Fig. 5 is a vertical transverse section of said scaffold-support on line 5-5, Fig. 3.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* designates a portion of a wall of a building, which wall is built around and incloses the usual steel or iron framework composed of horizontally-arranged beams *b* and vertical columns or supports *b'*. The framework of the building is also provided with horizontally-arranged beams *b'*, which are placed at right angles to the front beams *b*, as shown in Fig. 2. As the wall is raised and the erection of the building progresses, it is necessary to supply the material for the surrounding and partition walls, for which purpose it is customary to provide a scaffold *c*, which has to be raised as the wall is raised and the erection of the building gradually continued. The scaffold *c* is supported at either end by means of ropes *f* *g*, which are attached at their lower ends by means of eyes to hooks on the scaffold and which are wound up on two parallel drums *f'* *g'*, that are supported on a horizontal frame which comprises two parallel beams *d*, that are placed transversely to the wall beam

or beams *b* and extend sufficiently forward from the same so as to permit the free raising and lowering of the scaffold *c*, suspended from the ropes. The inner ends of the beams *d* are attached to the supplemental transverse beams *d'* of the framework of the building by means of locking-yokes or other locking devices *e'*, so as to be firmly held in position thereon. The beams *d* are preferably arranged in pairs, as shown in Figs. 1 and 4, and serve for supporting the framework *c*, on which the journal-bearings of the parallel drums *f'* *g'* are supported. The frame is made in the form of parallel side angle-irons *e'* and transverse connecting members *e'*, said angle-irons resting on the beams *d* of the framework and being attached thereto in any suitable manner, so as to prevent their shifting on the supporting-beams. To the angular side rails of the frame *e* are attached the journal-bearings for the shafts of the drums *f'* *g'*, which drums are provided at one end with worm-gears *f''* *g''*, which mesh, respectively, with right and left hand worms *f'''* *g'''* of a worm-shaft *s*, which is supported in bearings at the upper ends of upright supports *e'*, as shown clearly in Figs. 3 and 4. An actuating device for said worm-shaft is operative from the scaffold to turn the shaft in either direction for raising or lowering the scaffold. The actuating device shown for this purpose will now be described. To the end of the worm-shaft *s* is attached a sprocket-wheel *h*, over which is passed an endless sprocket-chain *h'*, which is of sufficient length to extend in downward direction nearly to the scaffold *c*. Separate locks are provided for each drum to render the scaffold safe in case the thread of either worm should become worn or for any reason be disengaged from its worm-gear. This is important, because the disengagement of the worm-gearing for either drum would precipitate the occupant of the scaffold to earth. For convenience in operation and to avoid a multiplicity of parts a releasing device common to both said locks is operative from the scaffold. By such means the operator on the scaffold may release both locks with one hand and raise or lower the scaffold with the other. The opposite ends of the drums *f'* *g'* are provided with ratchet-wheels *i*, the teeth of which extend in opposite directions and which are engaged by pawls *i'*, that are pivoted to upright supports on the framework *c*, said pawls being provided with downwardly-ex-

tending arms δ , which are connected at their lower ends by ropes or other flexible connections δ with the connecting ring or link δ of a rope or similar connection δ , that extends in downward direction to the scaffold, so as to be conveniently taken hold of by the man on the scaffold whenever it is desired to release the pawls or drop the same for locking the drums.

By operating the sprocket-wheel chain the worm-shaft is turned and the drums rotated in opposite direction to each other by the worm-gear transmission. The suspension-ropes f and g on which the scaffold is suspended are wound upon the drums in opposite directions, one rope, f , being attached to one end of the drum, while the rope g is attached to the opposite end of the drum, so that the strain exerted by the suspension-ropes on the drums, being in opposite direction, balance each other and produce thereby the even winding of the ropes on the drums, the ropes extending in downward direction at the outer circumference of the drums, so as to provide the distance required by them for suspending the scaffold without the necessity of any guide-pulleys for one or both suspension-ropes.

The scaffold can be raised and instantly stopped at any desired point owing to the well-known locking action on the motion-transmitting worm-gears. While the scaffold is raised by the worm-gear mechanism described the drums are turned toward each other, while the pawls pass over the teeth of the ratchet-wheel and are always held in locking engagement with the same, so that no danger of any slipping of the suspension-ropes under the weight placed on the scaffold is possible, the ratchet-wheel and pawl mechanism serving as an auxiliary safety-guard for the locking action of the worm-gear transmission. When the scaffold is to be lowered, the pawls have to be released from the teeth, so as to permit the downward motion. For this purpose the rope δ is pulled, which lifts the pawls and withdraws them from the teeth of the ratchet-

wheels. The pawls are held out of engagement with the ratchet-wheels by the rope until the lowering motion is completed, when they are permitted to drop again into engagement with the teeth of the ratchet-wheels. The scaffold-support is moved to the points required on the steel or iron framework of the building to be erected and also for the higher stories of the building as the erection of the same progresses.

The advantages of my improved scaffold-support are, first, that the construction is considerably simplified; second, that the speed at which the scaffold can be raised or lowered is considerably increased; third, that the perfect safety and reliability of the scaffold is obtained owing to the combined action of the worm-gear and pawl-and-ratchet mechanism; fourth, that the suspension-ropes being arranged at the outside of the drums and wound up in diagonally opposite directions on the same prevent any uneven strain on the drums and produce the even winding on and unwinding of the suspension-ropes from the drums.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A scaffold-support comprising a frame, winding-drums supported thereby parallel to each other, suspension-ropes wound and unwound from said drums and adapted for connection with opposite ends of the scaffold, worm-gears in fixed relation to said drums, a worm-shaft supported on said frame and provided with worms engaging said worm-gears respectively, means operative from the scaffold to turn said shaft in either direction for raising or lowering said scaffold, separate auxiliary safety-locks for the respective drums, and a releasing device common to said locks and operative from the scaffold.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MICHAEL CAVANAGH.

Witnesses:

PAUL GOEPFEL,
HENRY J. SCHRIER.

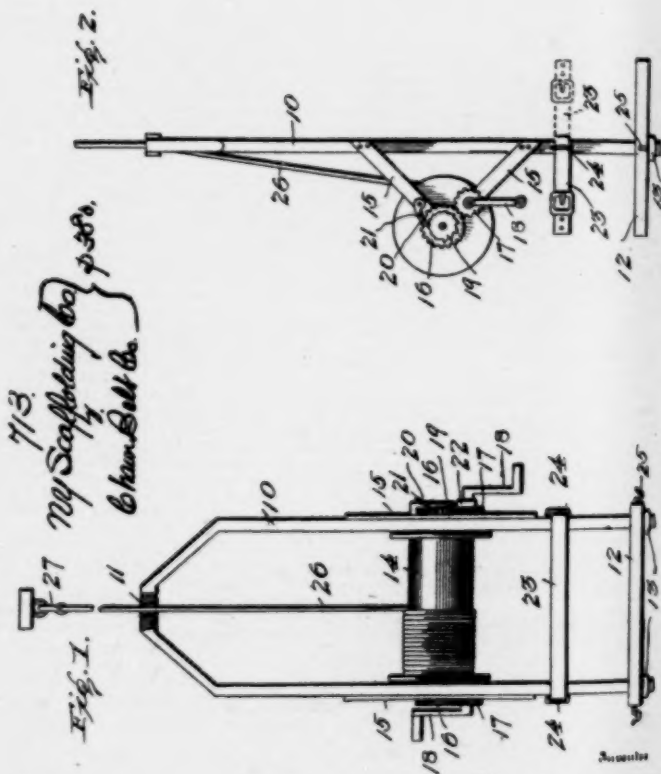
(Here follows diagram marked p. 380)



H. B. GRANDALL.

HOIST CHAIR.

APPLICATION FILED DEC. 21, 1904.



Witnesses
J. L. Knochman
H. J. Anderson

Henry B. Grandall
A. H. Hammer
Attorney

UNITED STATES PATENT OFFICE.

381

HENRY B. CRANDALL, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-FOURTH TO JOHN L. McMANUS AND ONE-FIFTH TO JAMES D. MacPHERSON, OF LYNN, MASSACHUSETTS.

HOIST-CHAIR.

No. 797,722.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed December 31, 1904. Serial No. 229,293.

To all whom it may concern:

Be it known that I, HENRY B. CRANDALL, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Hoist-Chairs, of which the following is a specification.

This invention relates to chairs or seats of that type which is suspended from an overhead structure and which may be hoisted or lowered to enable a workman to vary his position relatively to the building or other structure upon which he is engaged. Chairs of this type are used by painters, riggers, or by workmen employed upon other kinds of construction or repair work on elevated structures. It is essential, of course, that such a device to be useful must be safe and strong and easily operated.

The object of my invention is to provide a hoist-chair of this type which shall not only meet the above requirements, but shall be simple and of low cost.

A further object of my invention is to provide a device of this character which will present no material obstruction to the workman whether he is sitting facing one way or the other.

To these ends the invention consists in the construction and combination of parts substantially as hereinafter described and claimed.

Of the accompanying drawings, Figure 1 represents a chair embodying my invention in elevation, the upper portion of the yoke-frame being in section, said figure also representing the hoisting-rope as connected to a portion of an overhead structure. Fig. 2 represents an elevation from one side of Fig. 1.

Similar reference characters indicate the same or similar parts in both figures of the drawings.

The frame of the chair comprises a yoke 10, having an eye 11 at its top, the said yoke being preferably composed of a single piece of wrought-iron or other suitable metal. It may be formed of tubing or of solid round or flat metal. The lower ends of the side members of the frame or yoke 10 are preferably screw-threaded, whereby nuts 13 may be employed to secure the seat 12, said seat having

openings at its ends through which the side bars of the yoke extend.

A winding drum or shaft 14 is mounted in bearings formed in brackets or braces 15, which extend out of the plane of the yoke to a suitable distance, so that the bearings formed at the apex of the brackets will support the winding-drum in a position where it will not conflict with the operations of the workman. Secured to each end of the shaft of the winding-drum is a gear 16, meshing with a pinion 17, mounted to rotate in a suitable bearing formed in or on the bracket 15 below the plane of the axis of the winding-drum. Each pinion is provided with a crank 18, by means of which it and the winding-drum may be operated. Since the axis of the winding-drum is above the horizontal plane of the axes of the two pinions 17, the said winding-drum is farther above the level of the workman than would be the case if its axis was coincident with or below the plane of the axes of the pinions. Consequently a workman sitting on the seat 12 will not find the winding-drum an obstruction in case he is facing that way, although he will be able to reach one or both of the cranks 18 to raise or lower himself.

One or both of the gears 16 has a ratchet 19, secured to or integral with it, and a dent-pawl 20 is pivoted to the bracket 15 and so arranged as to engage the ratchet 19 to prevent the unwinding of the rope from the drum. The pawl 20 may be provided with a knob or pin 21 to enable the workman to conveniently throw the pawl out of engagement with the ratchet.

At 22 I have conventionally represented a suitable friction-brake which may be employed to prevent a too-rapid descent of the chair if the pawl should be disengaged from the ratchet and at the same time neither of the cranks in the hand of the workman.

At 23 I have represented a strap adjustable in length by means of a buckle, said strap being engaged with the side bars of the frame or yoke and prevented from sliding vertically thereon by means of suitable loops 24, formed on or connected with the side bars of the yoke. This strap may be thrown either forward or back, as indicated by full lines and dotted lines in Fig. 2, to suit the

direction in which the workman is facing. Said strap is usually employed to form a back for the workman or a guard to prevent him from falling backward.

The rope 26 or equivalent flexible connection has one end suitably secured to the winding drum or shaft and is coiled thereon and extends through the eye 11 at the top of the yoke. Said rope may have a hook 27 at its upper end to be engaged with any suitable overhead rigid support, such as an eye, attached to a beam of the kind frequently employed on the roof of a building to enable a scaffold to be suspended therefrom.

The seat 12 may be provided with hooks 25, on which either paint-pails or bags of tools may be hung.

It will be observed that the construction is such that the suspending-rope extends in a nearly straight line from the winding-drum to its extreme upper end, said rope passing through but one guide-eye, and therefore being little liable to become worn. The device may be used with either side facing the work to be done. If the workman wishes to have the winding-drum constantly between him and the building, the drum will not present a material obstruction to his work because it is elevated considerably above the plane of his seat. There is therefore not even a rope in front of him to interfere with his work. If he wishes to work with his back to the drum, the crank-handle at either side can be easily reached and operated whenever the workman wishes to change his vertical position, as a partial turning of the workman upon the seat will enable him to reach one or the other of the cranks. It is to be noted

that the yoke is not only rigid, but is open both in front of and behind the operator and above him, so that, if desired, he may stand upright on the seat 12 and have his body in the plane of suspension. By this structure the workman or operator is allowed great freedom of movement.

Having now described my invention, I claim—

1. A hoist-chair comprising a rigid open yoke having an eye at its top and having a seat extending across and connecting its lower ends and rigid therewith, a winding-drum in a plane at one side of the vertical plane of the yoke and above the plane of the seat to permit the workman to occupy the plane of suspension and conveniently reach the drum, and means for operating said drum.

2. A hoist-chair comprising a rigid open yoke having an eye at its top and having a rigid seat extending across and connecting its lower ends, rigid brackets projecting from the sides of the yoke and having bearings, a winding-drum mounted in said bearings and having gears, pinions meshing with said gears and mounted in the brackets below said gears, and cranks connected with said pinions, the location of the winding-drum as described, enabling the workman to occupy the plane of suspension and to conveniently reach the said cranks.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

HENRY B. CRANDALL.

Witnesses:

H. JOSEPH DOYLE,
CHARLES F. ROBERTS.

(Here follow diagrams marked p.384 & 386)



384

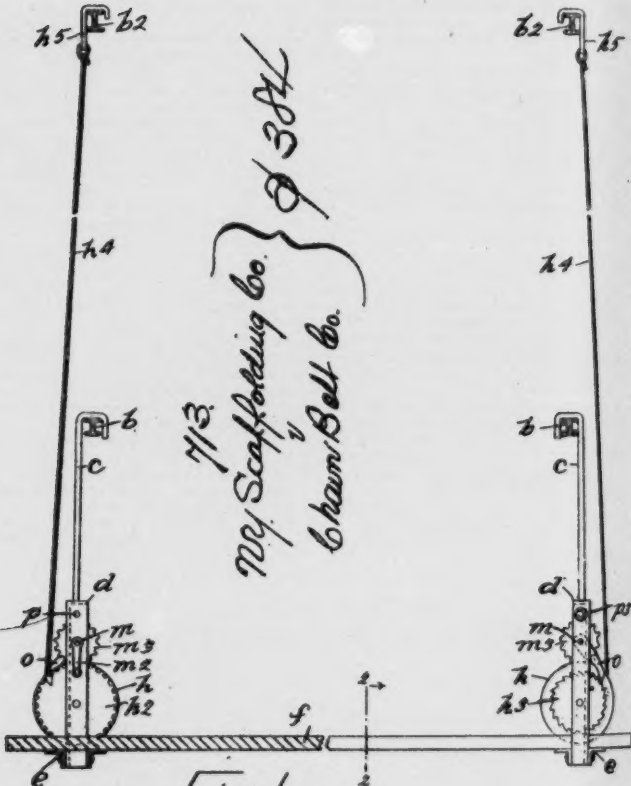
PATENTED MAY 28, 1907

W. J. MURRAY.

ADJUSTABLE SCAFFOLD.

APPLICATION FILED NOV. 12, 1900.

2 SHEETS-SHEET 1



WITNESSES

Mountain

Fig. 1

27

INVENTOR

William J. Murray

J. Chai Lee
J770487

ATTORNEY

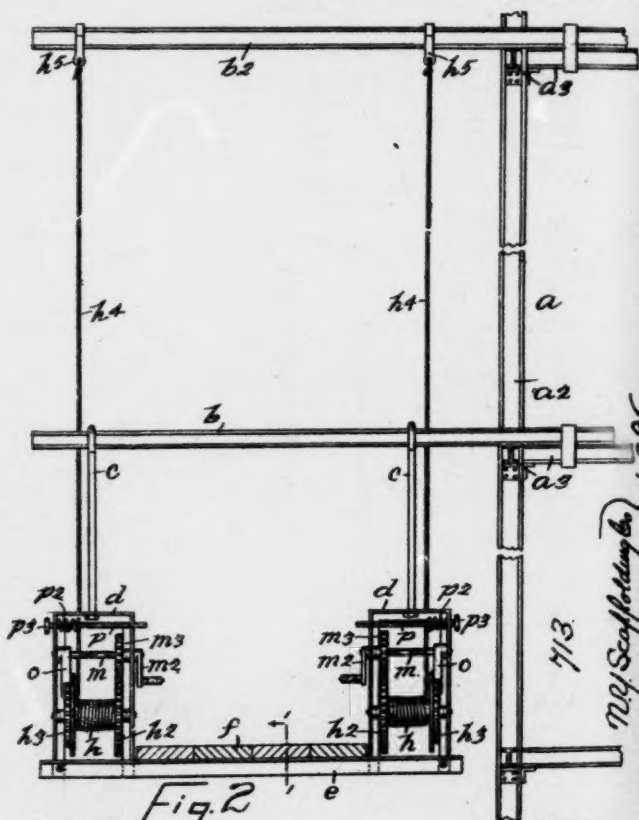
Adam Bee



PATENTED MAY 28, 1907.

W. J. MURRAY.
ADJUSTABLE SCAFFOLD.
APPLICATION FILED NOV. 12, 1908.

2 SHEETS-SHEET 2.



WITNESSES
Huot

Adam Bee

INVENTOR
William J. Murray

J. Chris Larch
ATTORNEY

M. J. Scaffolding Co. } 4386
Chas. B. Co.

387 UNITED STATES PATENT OFFICE.

WILLIAM J. MURRAY, OF NEW YORK, N. Y

ADJUSTABLE SCAFFOLD.

No. 854,950.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed November 13, 1905. Serial No. 343,976.

To all whom it may concern:

Be it known that I, WILLIAM J. MURRAY, a citizen of the United States of America, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Adjustable Scaffolds, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to builder's scaffolds and the object thereof is to provide such a scaffold which will permit of adjustment at any height during the construction of a building or the thereof; a further object being to provide such a scaffold which may be readily moved from one position to another by the workmen thereon without interfering materially with the work being performed and a still further object being to provide a scaffold of this description in which different supports are employed and in which the shifting from one set of supports to another set may be accomplished without interfering, in any degree, with the workmen thereon or their work.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a longitudinal view of a scaffold constructed according to my invention and shown partly in a section taken on the line 1—1 of Fig. 2; and Fig. 2 is a view thereof taken on the line 2—2 of Fig. 1 and showing partially the building upon which it is mounted and the manner of mounting.

In the drawings forming a part of this application I have shown partially a building of structural iron and in course of construction and which comprises the usual uprights *a*, and horizontal beams *c* and in the practice of my invention I provide out-riggers *b* and *b'* which are secured to the structure *a* in any desired manner but which may be readily removed from one position to another as the work progresses and it will be understood that in buildings already finished the out-riggers *b* and *b'* may be projected through windows or secured to the roof in any manner to make them safe.

In the position of the scaffold shown the out-riggers *b* have each two rods suspended therefrom said rods *e* being each secured, preferably

detachably, to a frame *d* composed preferably of angle-iron, said frames being arranged in pairs and each pair being secured to a horizontal beam *c*, said beams *c* serving as supports for the usual planking *f* composing the flooring of the scaffold.

Rotatably mounted in each of the frames *d* is a drum *h* provided with a gear-wheel *h'* and a ratchet-wheel *h''* and a rope or cable *k* is wound upon the drums *h* and are each provided with a hook *h'* or equivalent device on the outer ends thereof. Rotatably mounted in each of the frames *d*, over the drums *h*, is a shaft *m* provided with a crank-arm *m'* and with a pinion *m''* engaging the gear-wheel *h'* and loosely mounted on the shaft *m* is a pawl *e* which engages the teeth of the ratchet-wheel *h''* as clearly shown. Passing through the frames *d*, over the shafts *m*, is a rod *p* which is normally forced in the direction of the crank-arm *m'* by means of a spring *p'* and the rods *p* are each provided with a handle *p''* by means of which they may be drawn backwardly and, if desired, devices to hold the rods *p* in their backward position may be provided, none however being shown as various simple devices for this purpose are known.

In the use of my invention, a set of out-riggers *b* is placed in position and the hooks *h'* of the cables *k* are hung thereon and when the crank-arms *m'* are operated the cables are wound on the corresponding drums until the frames *d* are clear of the ground after which the planking *f* is placed in position and the scaffold is ready for use, and, as the work progresses, the scaffold is raised by degrees until the cables are almost entirely wound on the drums and the scaffold is in close proximity to the out-riggers *b*. Before this position has been reached by the scaffold, however, workmen other than those upon the scaffold have arranged the set *b'* of the out-riggers at a greater height after which the rods *e* are hooked to the out-riggers *b'*, the cables unwound from the drums and the hooks thereof hung from the out-riggers *b'* and when the crank-arms are again operated the scaffold is supported from the out-riggers *b'* after which the out-riggers *b* are removed and secured at a still greater height than the out-riggers *b'* and ready for another shift. It will be seen that the work being done from the scaffold has not been interfered with in this shifting of supports and much saving of time results for the high priced mechanics for the reason that ordinary laborers can per-

form the said shifting and they may also raise the scaffold by degrees, by means of the crank-arms m^1 , and it will be understood that the spring operated rods p are used as an additional preventive means of unwinding of the cables if the pawl o should fail to engage the ratchet-wheel properly.

Having fully described my invention, what I claim as new, with the reservation of such modifications as come within the scope of the following claims, is:—

The combination with two bars having means for detachably securing them to a building, of a platform, frames on said platform carrying means operable from the platform and having connections adapted to be connected to one of said bars for raising the platform, and supporting means on said frames extending above the said bar when the platform has been fully raised and adapt-

ed to detachably engage said bar and rigidly support the platform therefrom, whereby the platform may be connected to one bar by the raising means and raised to a level to engage the supporting means with said bar and may then remain supported by said bar while the other bar is placed at a higher level and the raising means secured to the latter, the bars thus becoming alternately points of raising support and of rigid support for the platform.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 8th day of November, 1906.

WILLIAM J. MURRAY.

Witnesses:

J. C. LARSEN,
H. MOHLAN.

(Here follows diagram marked p.390)

tr
7
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+
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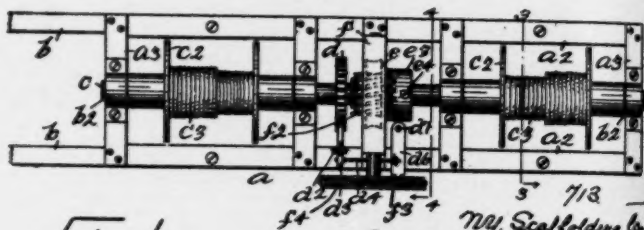


Fig. 1.

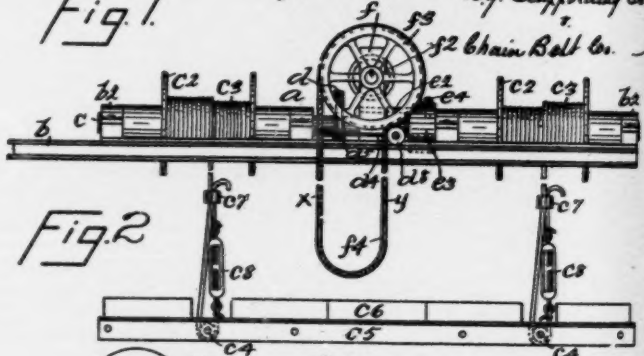


Fig. 2.

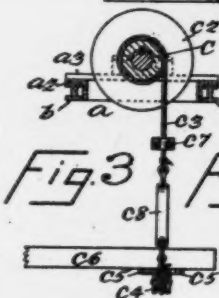


Fig. 3.

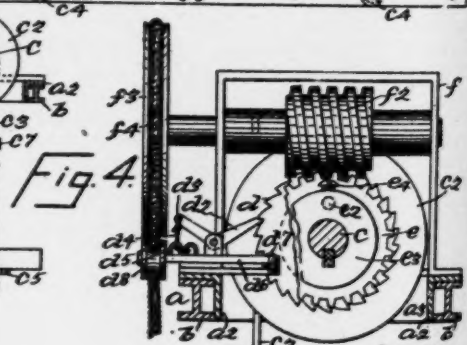


Fig. 4.

Witnesses:
Adam Bee
Hottel.

Inventor
William J. Murray
By Attorney
J. H. Lusk

UNITED STATES PATENT OFFICE.

WILLIAM J. MURRAY, OF NEW YORK, N. Y.

SCAFFOLD.

No. 882,206.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed June 2, 1907. Serial No. 377,081.

To all whom it may concern:

Be it known that I, WILLIAM J. MURRAY, a citizen of the United States of America, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Scaffolds, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to swinging scaffolds and the object thereof is to provide a scaffold of this class which may be raised or lowered from the platform thereof; a further object being to provide such a scaffold which is always securely locked in any position but which permits of unlocking in order to lower the platform and a still further object being to provide means in such a scaffold of adjusting the suspending cables individually to level the platform.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts are designated by the same reference characters in each of the views, and in which:—

Figure 1 is a plan view of the overhead support for one end of my scaffold; Fig. 2 is an end view of the entire scaffold; Fig. 3 is a section taken on the line 3—3 of Fig. 1; and Fig. 4 is an enlarged section taken on the line 4—4 of Fig. 1.

In the drawings forming a part of this application, I have shown a frame *a* composed of angle iron side members *a'* and end members *a''* and, as clearly shown, the frame *a* rests upon two outriggers *b* projecting from the building to which my scaffold is to be connected.

Mounted in bearings *b'* is a shaft *c* upon which are secured two drums *c'* upon which are wound the supporting cables *c''* and which pass around, at their lower ends, sheaves *c'''* mounted between two transversely arranged angle irons *c''''* which form the support for the scaffold planking *c'''''* and the ends of the cables *c''* are thence carried upwardly and adjustably secured to the standing part of the cables by means of clamps *c''''''* and between these clamps and sheaves *I* provide turn-buckles *c''''''''* by means of which the platform of the scaffold may be leveled.

Secured upon the shaft *c*, adjacent the center thereof, is a ratchet-wheel *d* and pivoted

to the frame *a* and cooperating with the wheel *d* is a pawl *d'* provided with an arm *d''* and to which is secured a cord *d'''* passing through a guide *d''''* and thence to a lever *d''''''* pivoted at *d''''''''* and to which it is secured and the lever *d''''''* carries a roller or sheave *d''''''''* at its outer end.

Rotatably mounted upon the shaft *c* is a worm-gear *e* into which projects a rod *e'* mounted upon a sliding collar *e''* keyed to the shaft *c* to prevent rotation thereon and a screw *e'''* locks the collar *e''* in position and it will be seen from this construction that, with the collar in its locked position, rotation thereof also rotates the worm-gear *e* but when the collar is moved away from the worm-gear engagement therewith ceases and the said worm-gear may then rotate independently of the shaft *c*.

Carried in a suitable frame *f* mounted upon the frame *a* is a worm *f'* provided with a pulley *f''* and over which passes an endless rope *f'''* which reaches the platform of the scaffold and by hauling upon one side of the pulley the said platform may be raised and the other or free side of the rope *f'''* passes over the roller *d''''''* which carries the said rope inwardly as shown in Fig. 2.

It will be seen from the foregoing description that when the scaffold is in position if the rope *f'''* be hauled upon at that side of the pulley *f''* marked *x* the platform is raised by means of the worm-gears rotation and consequent rotation of the shaft *c* and drums *c'* and the pawl *d'* locks the scaffold in any desired position, but if strain be placed upon the rope *z* and then strain be placed upon the rope *y* the roller *d''''''* moving back draws the pawl *d'* away from the ratchet wheel *d* and the platform may then be lowered until the strain upon the rope *y* is removed at which time the pawl again becomes operative upon the ratchet and the platform is again locked.

When rigging or unrigging the scaffold it is desirable to rotate the drums more rapidly than through the medium of the worm and worm-gear and if the collar *e''* be drawn out of engagement with the worm-gear free rotation of the drums results and much time is saved.

While the pawl *d'* is shown as gravity operated it will be understood that springs may be used to force it into engagement with the ratchet and various other changes in and modifications of the form of construction

shown and described may be made within the scope of the following claims and, with this reservation,

What I claim as new and desire to secure by Letters Patent, is:—

1. A scaffold, comprising overhead drums, a platform, cables dependent from said drums to said platform, means operative from the platform for rotating said drums and thereby moving said platform, locks for said drums and devices operated by said means for unlocking said drums.

2. A scaffold, comprising a platform, overhead drums, locks for said drums, cables on said drums and secured to said platform, drum operating devices operative from said platform, means for making said devices inoperative and means connected with said devices for unlocking said drums.

3. A scaffold, comprising a platform, overhead drums, cables thereon and secured to said platform, a lock for said drums, a worm and worm-gear in operative connection with said drums, an endless rope for rotating said

worm and means operative by said rope for making said lock inoperative.

4. A scaffold, comprising a platform, overhead drums, cables thereon and secured to said platform, a lock for said drums, an endless rope operative from said platform for rotating said drums and means operated by said rope for unlocking said drums.

5. A scaffold, comprising a platform, devices for moving said platform vertically, operating means for said devices and a lock for said devices, said operating means raising said platform when operated in one direction and releasing said lock and lowering said platform when operated in the opposite direction.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 31st day of May 1907.

WILLIAM J. MURRAY.

Witnesses:

ADAM BEE,
H. MOTTILAW.

(Here follow diagrams marked p.394 & 396)



E. WHITNEY.
SCAFFOLD.

APPLICATION FILED JAN. 26, 1911.

Patented July 18, 1911.

2 SHEETS-SHEET 1.

998,270.

7/13
N.Y. Scaffolding Co. } \$394
v.
Chain Belt Co.



Witnesses

[Signature]

J. M. Fuller

E. Whitney



UNITED STATES PATENT OFFICE.

ROBERT WHITNEY, OF OMAHA, NEBRASKA.

SCAFFOLD

998,270.

Specification of Letters Patent. Patented July 18, 1911.

Application filed January 28, 1911. Serial No. 605,323.

To all whom it may concern:

Be it known that I, ROBERT WHITNEY, citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Scaffolds, of which the following is a specification.

This invention relates to an improved scaffold for use in the erection of buildings of stone, brick, cement and the like, and especially to that class of buildings which are known as steel or reinforced buildings wherein it is the custom to form the outer walls from an outside scaffold.

Heretofore it has been the custom to erect temporary scaffolds upon timbers projected from windows or other orifices through the walls of the building, or to hang temporary scaffolds from depending members supported upon the upper edge of the frame or walls being constructed. This class of scaffolds necessitates the knocking down of the same and the reerection of the scaffold every five or six feet of the entire height of the wall during its erection. Scaffolds have also been used which employ drums about which are wound cables depending from an overhanging beam supported at the top of the steel frame of the building. In raising the scaffold the cable is wound about the drum taking up considerable space as it nears the top of the building and increasing the size of the drum, the latter necessitating a corresponding increase in the power for turning the drum when raising a given load.

An object of this invention is to provide a scaffold which overcomes the above objections and which may be raised or lowered at will against the wall being erected or the steel frame of the building.

The invention contemplates a scaffold which is hung upon a pair of outwardly projecting timbers disposed upon the top of the frame of the building by means of cables which extend down from the timbers toward the ground. The scaffold is provided with an improved mechanism through which the cables pass in order to raise or lower the scaffold.

The improved scaffold is further provided with a double check or braking mechanism engaging with the cable to insure the safety of the workmen when operating the scaffold and while working upon the wall.

For a full understanding of the invention and the merits thereof and also to acquire a

knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a detail perspective view of the improved scaffold as applied to the outer wall of a building; Fig. 2 is a front elevation of one of the hoisting frames detached from the scaffold; Fig. 3 is an edge view of the same; Fig. 4 is a section on the line 4-4 looking in the direction of the arrows; Fig. 5 is a transverse section on the line 5-5 of Fig. 2; Fig. 6 is an inner face view of one of the clutches employed; Fig. 7 is a side elevation of the same; and, Fig. 8 is an end view of the brake shoe employed in connection with the drum.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings, particularly to Fig. 1, the improved scaffold is disclosed as being hung against a building 10. A pair of supporting beams 11 are secured upon the top of the building 10 and have their outer ends projecting beyond the side thereof to carry depending cables 12 upon which the scaffold is supported.

The scaffold is formed with a supporting frame at each corner thereof receiving the adjacent depending cable 12, and being provided with novel means hereinafter set forth, for moving the frame upon the cable to vertically adjust the scaffold. The supporting frames are of like structure, each one of which comprises a pair of companion bars 13 and 14 curved edgewise into inverted U-form. The bars 13 and 14 are spaced apart at their upper closed ends by transversely spaced rollers 15 supported upon rivets 16 passing transversely through the bars and being headed against the outer faces thereof. The cable 12 passes down between the bars 13 and 14, and between the rollers 15 which center the cable in the upper end of the frame. The lower ends of the bars 13 are curved back and up providing loops 17, the upper ends of which rest against the inner faces of the lower ends of the bar 14. Rivets 18 pass through the lower ends of the bar 14, the upturned ends of the loops 17, and the bar 13 to bind the same together, the bars being spaced apart by sleeves 19 carried about the rivets 18. A supporting rod 20 is fitted at its ends in the loops 17.

and is headed at its extremities to engage against the outer edges of the loops 17 to hold the rod 20 from longitudinal displacement.

5 The upper end of the frame is provided with a pair of companion cross braces 21 secured at their ends across the outer faces of the bars 13 and 14 by rivets 22, passing through the same. Upper links 23 are hinged at their outer ends between the bars 13 and 14 upon the rivets 22, the links 23 being disposed in pairs and being spaced apart by collars 24 carried upon the rivets 22. Lower companion braces 25 are secured across the opposite sides of the main frame by transverse rivets 26 passing through the braces 25 and the bars 13 and 14. Lower links 27 are hinged at their outer ends between the bars 13 and 14 upon the rivets 26, the links 27 being disposed in pairs and being spaced apart by collars 28 carried upon the rivets 26. A pair of vertical clutch members 29 are carried upon the inner ends of the links 23 and 27 and are formed with longitudinal grooves 30 in their inner opposite faces, and are provided with outwardly extending ears 31 adjacent to their opposite ends fitting between each pair of the links 23 and 27. Pins 32 pivotally connect the ears 31 to the links so as to effect the parallel movement of the clutch members 29. Each of the clutch members 29 is provided with a lateral guide 33, the same being disposed at the opposite sides of the clutches, for engagement in a registering transverse groove 34 formed in the opposite side of the opposite clutch and adapted to hold the clutches in registration with one another.

40 Transverse pins 35 are carried between the bars 13 and 14 and support the outer ends of a pair of leaf springs 36 which are turned up at their ends to engage about the pins 35 to prevent the displacement of the springs 36. The springs 36 extend in toward the clutch members 29 and pass over stops 37 carried across the upper braces 21. Lips 38 project outwardly from the clutch members 29 above the upper ears 31 and form shoulders for the reception of the inner ends of the leaf springs 36 to hold the clutch members 29 normally up.

The frame is provided midway of its ends, and against the bar 13, with a pair of transversely registering brackets 39 held thereon by bolts 40. The bolts 40 pass through the bars 13 and 14 and carry thereabout spacing sleeves 41 to insure the rigidity of the brackets 39 upon the frame. The drum 42 is carried by the frame and has its trunnions journaled in the outer ends of the brackets 39, and receives thereover the cable 12. The brackets 39 carry the drum 42 at the inner side of the frame so that the cable 12 passes in a straight line up from the

drum 42 between the clutch members 29 to prevent the binding of the cable against the lower ends of the same.

As is disclosed in Figs. 2 and 4, the cable 12 is wound about the drum with but four complete turns when it passes down and out of one side of the frame. To insure the gripping of the cable 12 about the drum 42, a friction roller 43 is employed, the same engaging adjustably against the periphery of the drum 42 and provided with a series of grooves 44 snugly receiving the convolutions of the cable. The roller 43 is journaled in brackets 45 which are secured at their lower ends against the outer face of the bar 14 by the lower bolts 40, and are held against the bar 14 at their upper ends by short bolts 46. The brackets 45 are slotted longitudinally at their ends to receive the bolts 40 and 46 and to admit of the adjustment of the brackets 45 longitudinally upon the frame to move the roller 43 toward and from the drum 42.

One end of the drum 42 is provided with a fixed ratchet 47, by means of which the drum is actuated. The drum 42 carries a segment 48 upon one of its trunnions, as at 49, against the outer side of the ratchet 47, the segment 48 having an offset web 50 overhanging the ratchet 47. A supporting arm 51 projects up from the inner edge of the web 50 and hingedly supports a hand lever 52. The arm 51 is provided midway of its ends, and at its inner edge, with a projection 53 formed with a longitudinal slot 54 in which is adjustably positioned a stop-bolt 55. The stop-bolt 55 projects into the path of the lever 52 and engages therewith when the lever 52 is swung out from the frame, and is employed for the purpose of communicating the movement of the lever 52 to the segment 48 when it is desired to swing the segment out from the frame.

The web 50 is relatively narrow to accommodate pawls 56 and 57 hinged upon pins 58 carried through the lower corners of the arm 51 and the upper corners of the segment 48. A leaf spring 59 is secured midway of its ends by a screw 60 upon the web 50 and has its opposite extremities resting against the pawls 56 and 57. The pawls 56 and 57 are provided with shoulders 61 determining flat faces arranged at angles upon the pawls and against which the ends of the springs 59 rest when the pawls are turned into or out of operation. The pawl 56 carries an outwardly projecting lug 62 by means of which the pawl is raised out of engagement with the ratchet 47. The hand lever 52 is hinged adjacent to its lower end upon the upper extremity of the arm 51 by a rivet 63. The lower end of the hand lever 52 terminates a short distance above the drum 42 and pivotally carries upon its lower end a brake shoe 64. As is

908,270

disclosed to advantage in Fig. 8, the shoe 64 is of arcuate form and is provided with a semicircular groove in its lower face to receive and to bind against the adjacent lap of the cable 12. The shoe 64 is provided with spaced upstanding lugs 65 receiving therebetween the lower end of the hand lever 52. The lugs 65 are hinged upon the lever 52 by a rivet or pin 66. The lugs 65 are of such length that when the lever 52 is swung up against the adjacent bar 13 of the frame, the shoe 64 binds tightly against the cable 12 and holds the cable and the drum from movement. The bar 13 carries a hook 67 mounted upon a swivel-eye 68 carried upon the bar 13 in registration with the hand lever 42. The hook 67 is adapted to engage and hold the lever against the frame in a locked position.

In the erection of the scaffold the above described frames are arranged in pairs, the frames facing one another so as to dispose the hand levers 52 convenient to the hand of the operators, as shown in Fig. 1. End beams 69, of considerable thickness, are positioned across the supporting rods 20 of each pair of frames. The floor or body of the scaffold comprises a number of longitudinal beams 70 arranged longitudinally across the end beams 69 upon which they are supported.

In raising the scaffold the levers 52 are released from the hooks 67 and swung out from the frames. This movement of each of the levers raises the adjacent brake shoe 64 from the cable 12 and draws the segment 48 around to move the pawls 56 and 57 over the teeth of the ratchet 47. In moving the segment 48 the lower end of the hand lever 52 strikes the stop-bolt 55 and limits the outward swinging of the hand lever 52 about the pin 66. The weight of the scaffold now draws the frame down and permits the leaf springs 36 to raise the clutches 29 and bind the same against the sides of the cable 12. This holds the frame from moving down about the cable 12. The hand lever 52 is now moved in toward the frame, the same swinging about the pin 63 and binding the shoe 64 against the cable 12 and the drum 42. At the same time the segment 48 is carried with the lever 52, by reason of its binding action against the drum 42, and the pawls 56 and 57 engage with the teeth of the ratchet 47 to insure the turning of the drum 42. The cable is moved over the drum 42 during its rotation to draw the cable down between the clutches 29 and feed the cable out through the lower end of the frame. By reason of the spring action of the clutches 29 the cable can be drawn down between the clutches, but cannot be moved up therebetween until the clutches are held down by hand. The operation of the lever 52 is repeated whereby the drum

is turned a fraction of a revolution at each inward movement of the lever 52.

In lowering the scaffold the clutches 29 are drawn down against the tension of the springs 30 and held away from the sides of the cable 12 while the hand lever 52 is moved out from the frame a slight distance to ease up the pressure of the brake shoe 54 against the cable and the drum. When the frame is being lowered the pawls 56 and 57 are raised out of the path of the teeth of the ratchet 47, the same being held in such position by the spring 59 engaging against the opposite flattened faces of the pawls, for the purpose of freeing the drum and allowing it to rotate backwardly beneath the web 50.

From this construction and arrangement it is seen that this scaffold adjusting device is adapted for use in connection with very high buildings wherein a large amount of cable cannot be conveniently carried, and wherein it is not necessary to knock down and reconstruct the scaffold at each elevation of the same.

Having thus described the invention, what is claimed is:

1. A scaffold including, a supporting frame, a vertical cable passing through the frame, a drum rotatably disposed in the frame, said cable being wound about the drum and depending therefrom, a segment pivoted concentric to the drum upon the frame, an arm carried by the segment and being offset over the drum, a hand lever hinged upon the arm, a brake shoe pivoted upon the lower end of the hand lever and engaging against the periphery of the drum to bind the cable thereagainst, a ratchet fixed upon one end of the drum, pawls carried by the segment for engagement with the ratchet to rotate the drum, and a stop carried by the arm for limiting the movement of the lever and communicating its movement to the segment.

2. A scaffold including a frame, a cable depending through the frame, a drum mounted upon the frame and receiving the cable thereabout, and an operating lever hinged in the frame and having connection with the drum for rotating the same, said operating lever carrying braking means to regulate the passage of the cable through the frame.

3. A scaffold including a vertical cable, a frame engaging about the cable for vertical adjustment, a drum carried by the frame and receiving the cable, operating means carried by the frame for revolving the drum to raise the frame about the cable, and a braking mechanism carried by the frame and having connection to the operating mechanism for controlling the movement of the cable through the frame.

4. A scaffold including a vertical support-

ing cable, spaced bars engaging loosely against the sides of the cable, a clutch mechanism carried by the bars to engage the opposite sides of the cable to hold the frame from moving down thereabout, a feeding drum carried in the frame and engaging the cable, a segment carried by the frame concentric to the drum, a ratchet carried upon one end of the drum, pawls hinged upon the segment, a spring carried by the segment and engaging with the pawls to hold the same against the ratchet, shoulders formed upon the pawls for engagement with the spring to hold the pawls out of engagement with the ratchet, and a brake shoe carried by the segment for engagement against the cable and the drum to control the downward movement of the frame when the pawls are released from the ratchet.

5. A scaffold including a corner frame, supporting cable for the frame, cooperating clutch members carried in the upper end of the frame for engagement with the cable, a drum mounted upon the frame to receive the cable thereover, a lever carried upon the frame and having operative connection with the drum for rotating the same to raise the frame, and a brake shoe carried upon the lever and binding against the drum to regulate the downward movement of the frame about the cable.

6. A scaffold including a corner frame, a cable passing through the corner frame, a drum journaled in the frame and receiving the cable thereover, a lever pivoted in the frame and having connection with the drum for rotating the same, a brake shoe carried by the lever for binding against the cable and the drum during rotation, and a clutch mechanism carried in the frame to hold the cable from movement therethrough when released by the lever.

7. A scaffold including a corner frame, a cable depending through the frame, an operating lever carried by the frame, locking means connected to the lever for engagement with the cable to hold the same from movement through the frame, a drum journaled in the frame and having the cable wound thereabout, and rotating means hav-

ing connection with the lever and engaging with the drum for revolving the same.

8. A scaffold including a corner frame, a vertical supporting cable passing through the corner frame, a feeding drum journaled in the frame and receiving the cable, a clutch carried in the frame for engagement with the cable to hold the frame from downward movement thereabout, an operating lever carried by the frame and having connection with the drum to rotate the same, releasing means disposed in the frame and having connection with the drum and the lever to release the drum therefrom, and a brake carried by the lever for engagement with the drum to control the downward movement of the frame when the drum is released.

9. A scaffold including a corner frame, a vertical supporting cable passing through the frame, a feeding drum journaled in the frame and receiving the cable, an operating lever carried by the frame and having connection with the drum to rotate the same, a brake carried in the frame for engagement with the drum to control the downward movement of the frame, and connecting means arranged between the brake and the operating lever adapted to apply the brake upon the release of the drum from the lever.

10. A scaffold including a vertical frame, a cable depending through the frame for supporting the same, an automatic clutch carried in the upper end of the frame and engaging with the cable to normally bind the cable in the frame, a feeding drum journaled in the frame and engaging with the cable to raise the frame thereon, operating means carried by the frame and having connection with the drum for rotating the same, and a brake shoe disposed in the frame and engaging with the drum to control the downward movement of the frame about the cable.

In testimony whereof, I affix my signature in presence of two witnesses.

EGBERT WHITNEY. [L.S.]

Witnesses:

LOTTIE MARTIN,
M. S. WHITNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

(Here follows diagram marked p.402)



1,114,832.

Patented Oct. 27, 1914.

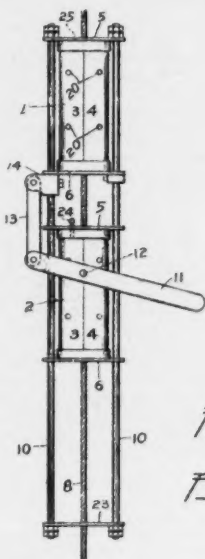


Fig. 1

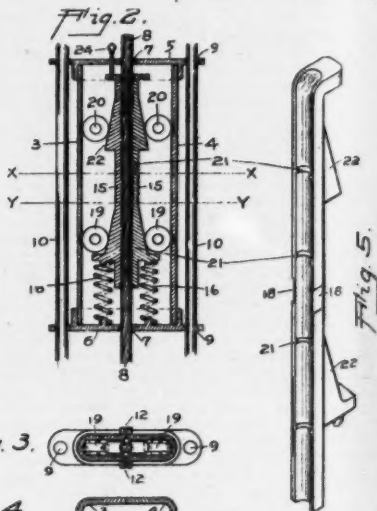


Fig. 3.

Fig. 4

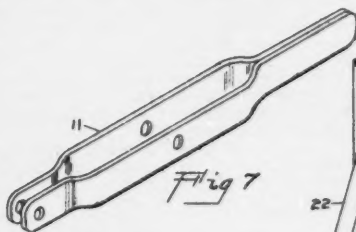
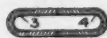
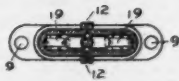


Fig. 7

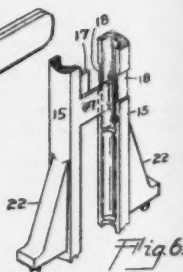


Fig. 6.

7/13
W. J. Scaffolding
Co. v.
Chain Belt Co.

Witnesses:

Charles A. Bennett
Elmore M. Robinson

Egbert Whitney

Inventor:

By Millard E. Sady Attorney

UNITED STATES PATENT OFFICE.

ROBERT WHITNEY, OF OMAHA, NEBRASKA.

HOISTING-MACHINE.

1,114,832.

Specification of Letters Patent.

Patented Oct. 27, 1914.

Application filed November 22, 1913. Serial No. 802,418.

To all whom it may concern:

Be it known that I, ROBERT WHITNEY, a citizen of the United States, residing in the city of Omaha, county of Douglas, and State of Nebraska, have invented certain new and useful Improvements in Hoisting-Machines, and have described the same in the following specification, illustrated by the accompanying drawings.

My invention relates to that class of hoisting machines which are commonly used in pairs suspended by cables at the side of a building in process of construction for the purpose of raising, lowering and supporting a platform for the accommodation of bricklayers and other workmen. A typical machine of this class is the subject of Letters Patent of the United States No. 908,270, which were issued to me July 18, 1911, for improvements in scaffolds.

The principal objects of the invention are these, viz: to simplify the construction, and reduce the number of parts and the cost of manufacture, of machines of this class; to make the machines compact, and to protect their clutch mechanisms from snow, ice, mortar, etc., and from personal interference; to avoid unnecessary friction; to hold the cables approximately straight constantly, and thereby avoid the work that would be involved in bending them around drums; to apply the operative power to the cables with maximum directness, and thereby to raise the given loads with minimum efforts; to facilitate the operative engagement of the machines with the cables and also with the platforms; and in general to increase the efficiency of machines of this class. To accomplish these objects I incorporate in my improved hoisting machine a pair of automatic clutches adapted to engage a suspending cable, means for holding the clutches constantly in vertical alinement and for carrying a load suspended therefrom, means for working the clutches repetitiously toward and from each other in such alinement upon the cable, and means for releasing the clutches severally.

In said drawings illustrating the best manner in which I have contemplated applying the principles of the invention Figure 1 is a side elevation of a hoisting machine which is constructed of iron and steel in accordance with these principles, and is applied to a suspending wire cable. Fig. 2

is a vertical axial section of a portion of Fig. 1, including the lower clutch. Fig. 3 is a horizontal section on the section line $x-x$ of Fig. 2. Fig. 4 is a like section of the clutch casing on the section line $y-y$ of Fig. 2. Fig. 5 is a perspective view of one of the clutch jaws. Fig. 6 is a perspective view of a portion of a pair of the clutch jaws. Fig. 7 is a detail.

In this illustrated and illustrative specimen of my invention, the two alining clutches are mounted respectively in the clutch boxes 1 and 2. Each of these boxes has a vertical peripheral split tubular wall, formed in duplicate wall sections 3 and 4, marginally contacting with each other, a cap 5 fitted over the top of the wall, and an inverted cap 6 fitted to the bottom of the same. These caps hold the contacting wall sections rigidly together, and have each a hole 7 through the middle for the accommodation of the steel wire cable 8, which is suspended from above. By these caps and their terminal perforations 9, the upper clutch box has a rigid engagement, and the lower clutch box a sliding engagement, with the vertical side rods 10, occupying those perforations. The lower clutch box is movable vertically a short distance toward and from the upper clutch box on and between these rods by the split hand lever 11, which works like a pump handle, on a pivot 12 projecting from that box, and is connected by the link 13 with the stop bracket 14 fixed on one of those rods. The clutch in each of these boxes comprises two duplicate vertically disposed semi-tubular jaws 15, mounted on the springs 16, and registering with each other face to face, being held in that position by the transverse guiding arms 17, working in the transverse slots 18 as the jaws approach and recede from each other. Being so held, they are movable vertically in unison between the anti-friction rollers 19, on the rivets 20 extending horizontally through the box. These jaws have the internal riblike teeth 21 arranged in relatively staggered positions in the two jaws respectively, to bite the cable; and external wedge-shaped projections 22 on the back of each jaw, to engage the rollers 19 and thereby to produce and to release the bite as the clutch rises and falls in the box. The key 24, is a removable pin longitudinally slidable by hand in the vertical hole 25 through the top

of either cap 5 alternatively, and adapted by downward pressure to depress and thereby release the described clutches.

The transverse and removable cross plate 23, which is perforated to accommodate the cable 8 connects the side rods 10 at the bottom, and is intended to support the platform.

When undisturbed by manipulation, both clutches of the loaded machine grip the suspending cable; the lower clutch being actuated by the clutch springs, which force the wedging jaws upward and together between the rollers 19; and the upper clutch being additionally actuated by the downward pull of the platform or other load, communicated to those rollers through the side rods 10 and the upper clutch box, and forcing the jaws together. To raise the load, a workman first lifts the free end of the lever, thereby releasing and raising the lower clutch box, and then forces down the lever, thereby bringing the lower clutch into action and releasing and lifting the upper clutch from which the load is suspended. By thus raising and lowering the lever repetitiously, like a pump handle, he causes the machine to climb the cable with an inch worm movement, so to speak, and raises the platform to any desired level step by step. To lower the load, both clutches gripping as above described, the operator first releases the upper clutch with the key 24, then lets down the upper clutch box and the dependent load by raising the lever, then with the same key, transferred to the lower clutch box, while the upper clutch automatically grips the cable, he releases the lower clutch and then lowers the lower clutch box in the same manner, thereby placing the machine in posture for raising or lowering again in the same manner.

Constructed and operating as described, the machine accomplishes the above stated object of my invention in all its branches.

I claim:—

1. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip alternatively a suspending cable, means for raising and lowering the clutches independently on the cable, and a suspended frame, upheld by the clutches alternatively and provided with means for holding both clutches in vertical alignment.

2. A hoisting machine of the specified class, comprising two automatic clutches adapted to engage a suspending cable, means for holding the clutches constantly in ver-

tical alignment and for carrying a load suspended therefrom, means for moving the clutches toward and from each other in such alignment, and means for releasing the clutches severally.

3. A hoisting machine of the specified class comprising two automatic clutches, means for holding the clutches in vertical alignment and for carrying a suspended load, means for moving the clutches toward and from each other in such alignment, and means for releasing the clutches severally; each clutch having two co-acting, spring-mounted, vertical wedge jaws between anti-friction rollers, and being adapted to grip automatically a suspending cable and to be released from that cable.

4. A hoisting machine of the specified class, comprising two clutches adapted to grip a cable automatically, two clutch boxes holding the clutches respectively, two vertical rods having a rigid connection with one of the clutch boxes and a sliding engagement with the other, and holding the clutch boxes and contained clutches constantly in vertical alignment at a changeable distance apart, a cross connection between the rods for support of the load, means for sliding one of the clutch boxes toward and from the other on the vertical rods, and means for releasing the clutches severally.

5. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip a suspending cable, means for holding the clutches constantly in vertical alignment and for carrying the load suspended therefrom, means for releasing the clutches severally, and a link and lever connection between the clutches for moving them toward and from each other.

6. A hoisting machine of the specified class, comprising two automatic clutches adapted to grip a suspending cable, separate boxes inclosing the clutches respectively, means for holding the clutch boxes in vertical alignment at varying distances apart and for carrying a load, means for reciprocating the clutch boxes, and a key slidable in a hole in each box for releasing the contained clutch.

In testimony whereof I subscribe my name hereto in the presence of two witnesses.

EGBERT WHITNEY

Witnesses:

WILLARD EDDY,
I. S. LEAVITT.

405

Certificate of Clerk.

UNITED STATES OF AMERICA,

Eastern District of Wisconsin ss:

I, F. C. Westfahl, Jr., Clerk of the District Court of the United States of America for the Eastern District of Wisconsin, do hereby Certify that I have compared the writings annexed to this Certificate with their Originals now on file and remaining of record in my Office, and that they are true copies of such Originals, and correct transcripts therefrom, and that the same is a true copy of the record, assignment of errors and all proceedings in the case of New York Scaffolding Company vs. Chain Belt Company and Egbert Whitney, made pursuant to præcipe.

In Testimony Whereof, I have hereunto set my hand, and duly affixed the seal of the said Court at the City of Milwaukee, in said District, this 19th day of July, in the year of our Lord, one thousand nine hundred sixteen, and of the Independence of the United States, the 141st.

[SEAL.]

F. C. WESTFAHL, JR., *Clerk.*

(Canceled U. S. Rev. Stamp. Written across face: 7/19/16.
F. W. Jr.)

406

Citation.

United States of America to New York Scaffolding Company,
Greeting:

You are hereby cited and admonished to be and appear before the United States Circuit Court of Appeals for the Seventh Circuit, to be holden at Chicago, Illinois, thirty (30) days after the date hereof, pursuant to an appeal which has been allowed by the District Court of the United States for the Eastern District of Wisconsin, from its decree in a suit wherein the Chain Belt Company and Egbert Whitney are appellants and you are appellee, to show cause, if any there be, why the decree rendered against said appellants as in the said appeal should not be corrected, and why speedy justice should not be done to the parties in that behalf.

Given under my hand at Milwaukee, Wisconsin, this 14th day of June, 1916.

F. A. GEIGER,
*Judge of the United States District Court
for the Eastern District of Wisconsin in
the Seventh Circuit.*

Received a copy of the above citation this 16th day of June, 1916.

GOEPEL & GOEPEL &
ALEXANDER & BURKE,
Solicitors for Plaintiff & Appellee.

407 United States Circuit Court of Appeals for the Seventh Circuit.

I, Edward M. Holloway, Clerk of the United States Circuit Court of Appeals for the Seventh Circuit, do hereby certify that the foregoing printed pages, numbered from 1 to 406, inclusive, contain a true copy of the printed record, printed under my supervision, and filed September 29, 1916, on which this cause was argued, heard and determined in the case of Chain Belt Company and Egbert Whitney vs. New York Scaffolding Company, No. 2408, October Term, 1915, as the same remains upon the files and records of the United States Circuit Court of Appeals, for the Seventh Circuit.

In testimony whereof I hereunto subscribe my name and affix the seal of said United States Circuit Court of Appeals for the Seventh Circuit, at the City of Chicago, this fifth day of September, A. D. 1917.

[Seal United States Circuit Court of Appeals, Seventh Circuit]

EDWARD M. HOLLOWAY,

*Clerk of the United States Circuit Court of Appeals
for the Seventh Circuit.*

At a Regular Term of the United States Circuit Court of Appeals for the Seventh District begun and held in the United States Court room in the city of Chicago, in said Seventh Circuit, on the fifth day of October, 1915, of the October term in the year of our Lord one thousand nine hundred and fifteen, and of our Independence the one hundred and fortieth year.

And afterwards, to-wit: On the twentieth day of July, 1916, in the October term last aforesaid, there was filed in the office of the Clerk of this Court a certain Stipulation as to the record on appeal, which said Stipulation is not copied here, as the same appears in the copy of the printed record certified herewith.

And afterwards, to-wit: On the twenty-fifth day of July, 1916, in the October term last aforesaid, came the appellants, by their counsel, Mr. Wallace R. Lane and Mr. George Mankle, and filed in the office of the Clerk of this Court their appearance, which appearance is in the words and figures following, to-wit:

United States Circuit Court of Appeals for the Seventh Circuit,
October Term, 1915.

No. 2408.

CHAIN BELT COMPANY et al., Appellants,

vs.

NEW YORK SCAFFOLDING Co., Appellee.

The Clerk will enter *my* appearance as counsel for the appellants.

WALLACE R. LANE,
GEORGE MANKLE,
1520 Marquette Bldg., Chicago.

Endorsed: Filed July 25, 1916. Edward M. Holloway, Clerk.

And afterwards, to-wit: On the seventh day of September, 1916, in the October term last aforesaid, came the appellee, by its counsel, Mr. C. P. Goepel, and filed in the office of the Clerk of this Court his appearance, which appearance is in the words and figures following, to-wit:

United States Circuit Court of Appeals for the Seventh Circuit,
October Term, 1915.

No. 2408.

CHAIN BELT COMPANY AND EGBERT WHITNEY, Appellants,

vs.

NEW YORK SCAFFOLDING COMPANY, Appellee.

The Clerk will enter my appearance as counsel for the appellee.
C. P. GOEPEL.

Endorsed: Filed Sept. 7, 1916. Edward M. Holloway, Clerk.

At a Regular Term of the United States Circuit Court of Appeals for the Seventh Circuit, begun and held in the United States Court Room in the City of Chicago in said Seventh Circuit on the third day of October, 1916, of the October term in the year of our Lord one thousand nine hundred and sixteen and of our Independence the one hundred and forty-first year.

And afterwards, to-wit: On the first day of November, 1916, in the October term last aforesaid, the following further proceedings were had and entered of record, to-wit:

WEDNESDAY, November 1, 1916.

Court met pursuant to adjournment and was opened by proclamation of crier.

Present:

Hon. Francis E. Baker, Circuit Judge, presiding.

Hon. Christian C. Kohlsaat, Circuit Judge.

Hon. Julian W. Mack, Circuit Judge.

Hon. Samuel Alschuler, Circuit Judge.

Hon. Evan A. Evans, Circuit Judge.

Edward M. Holloway, Clerk.

John J. Bradley, Marshal.

Before: Hon. Samuel Alschuler, Circuit Judge.

2408.

CHAIN BELT COMPANY et al.

vs.

NEW YORK SCAFFOLDING Co.

Appeal from the District Court of the United States for the Eastern
District of Wisconsin.

Upon application of counsel for appellee, it is ordered that the time for filing brief for the appellee in this cause be, and the same is hereby extended ten days.

And afterwards, to-wit: On the second day of January, 1917, in the October term last aforesaid, the following further proceedings were had and entered of record, to-wit:

TUESDAY, January 2, 1917.

Court met pursuant to adjournment and was opened by proclamation of crier.

Present:

Hon. Francis E. Baker, Circuit Judge, presiding.
Hon. Christian C. Kohlsaatt, Circuit Judge.
Hon. Julian W. Mack, Circuit Judge.
Hon. Samuel Alschuler, Circuit Judge.
Hon. Evan A. Evans, Circuit Judge.
Edward M. Holloway, Clerk.
John J. Bradley, Marshal.

Before Hon. Francis E. Baker, Circuit Judge; Hon. Christian C. Kohlsaatt, Circuit Judge; Hon. Samuel Alschuler, Circuit Judge.

2408.

CHAIN BELT COMPANY et al.

vs.

NEW YORK SCAFFOLDING Co.

Appeal from the District Court of the United States for the Eastern District of Wisconsin.

It is ordered by the Court that this cause be, and the same is hereby set down for hearing on January 16, 1917.

And afterwards, to-wit: On the sixteenth day of January, 1917, in the October term last aforesaid, the following further proceedings were had and entered of record, to-wit:

TUESDAY, January 16, 1917.

Court met pursuant to adjournment and was opened by proclamation of crier.

Present:

Hon. Francis E. Baker, Circuit Judge, presiding.
Hon. Christian C. Kohlsaat, Circuit Judge.
Hon. Julian W. Mack, Circuit Judge.
Hon. Samuel Alschuler, Circuit Judge.
Hon. Evan A. Evans, Circuit Judge.
Edward M. Holloway, Clerk.
John J. Bradley, Marshal.

Before Hon. Francis E. Baker, Circuit Judge; Hon. Julian W. Mack, Circuit Judge; Hon. Samuel Alschuler, Circuit Judge.

2408.

CHAIN BELT COMPANY et al.

vs.

NEW YORK SCAFFOLDING COMPANY.

Appeal from the District Court of the United States for the Eastern District of Wisconsin.

Now this day come the parties by their counsel and this cause now comes on to be heard on the printed record and briefs of counsel and on oral arguments by Mr. Robert H. Parkinson and Mr. Wallace R. Lane, counsel for appellants, and by Mr. Paul Bakewell and Mr. C. P. Goepel, counsel for appellee, and the Court having heard the same takes this matter under advisement.

And afterwards, to-wit: On the nineteenth day of January, 1917, in the October term last aforesaid, came the appellee, by its counsel, Mr. Paul Bakewell, and filed in the office of the Clerk of this Court his appearance, which appearance is in the words and figures following, to-wit:

United States Circuit Court of Appeals for the Seventh Circuit,
October Term, 1916.

No. 2408.

CHAIN BELT COMPANY et al., Appellants

vs.

NEW YORK SCAFFOLDING Co., Appellee.

The Clerk will enter my appearance as counsel for the Appellee.
PAUL BAKEWELL.

Endorsed: Filed Jan. 19, 1917. Edward M. Holloway, Clerk.

And afterwards, to-wit: On the tenth day of August, 1917, in the October term last aforesaid, there was filed in the office of the Clerk of this Court the Opinion of the Court, which said Opinion is in the words and figures following, to-wit:

In the United States Circuit Court of Appeals for the Seventh Circuit, October Term, 1916, April Session, 1917.

No. 2408.

CHAIN BELT COMPANY and EGBERT WHITNEY, Appellants,

vs.

NEW YORK SCAFFOLDING COMPANY, Appellee.

Appeal from the District Court of the United States for the Eastern District of Wisconsin.

Before Baker, Mack and Alschuler, Cir. JJ.

Appeal from decree awarding injunction and accounting for infringement by appellants of claims 1 and 3 of the United States patent to Henderson No. 959,008, May 24, 1910, for scaffold-supporting means. The claims are as follows:

"1. A scaffold consisting in the combination of cross-beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a continuous U-shaped metal bar extending around the under side of and upward from the associated beam, and a hoisting drum rotatably supported by the side members of such bar.

3. A scaffold consisting of a plurality of U-shaped bars arranged in pairs, a crossbeam laid in and extending between each pair of such U-shaped bars, a floor laid upon said crossbeam, a drum rotatably supported between the upwardly extending side members of each

of said U-shaped bars, and means for controlling the rotation of said drum."

Figures 1 and 5 of the patent drawings are as follows:

FIG. 1.

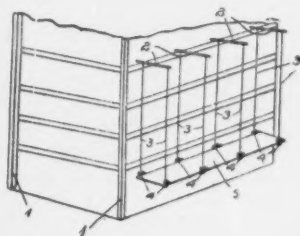


FIG. 5.

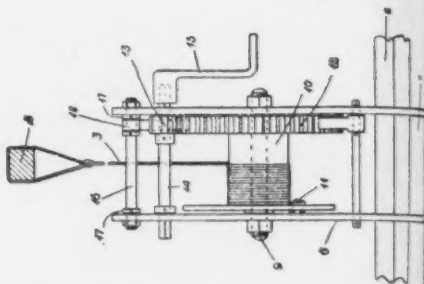


Fig. 1 shows a typical scaffold 5 in this art, suspended by ropes or cables 3, which hang from outriggers 2 attached to the building 1. The hoisting machines 4 are located on the platform and are manually operated to raise and lower the platform. Fig. 5 shows Henderson's hoisting machine, which, in association with the other enumerated elements, constitutes the combination of the claims in issue. The frame 6 extends downward, and is of U shape, adapted at 7 to receive, surround and support the ends of the crosspieces or putlogs laid therein, which in turn support the platform boards 8, laid upon them. The upright sides 6 of the frame hold the revolving drum 10 to which the cable is fastened, and by means of a lever and handle 15 the drum is revolved by the operator and the scaffold platform thereby raised or lowered.

The defenses were, non-infringement, and invalidity of the patent through anticipation, prior use and want of invention or patentability.

Opinion by ALSCHULER, *Cir. J.*:

1. The claims are for a combination, no element of which possesses novelty, and the combination itself shows but slight advance over the prior art. Patent No. 854,959 (1907) to Murray presents all the elements of the Henderson combination except the U-shaped bar forming the bottom of the frame in which the crossbeams or putlogs are laid. In Murray's frames the side bars extend below the floor, and are bolted or riveted to the angle iron putlogs there shown. The frame has a revolvable drum extending between the sides of the frame, with handle and ratchet for operating the drum on which the cable is wound. In this construction the frame holding the drum is necessarily set at right angles to the building. Patent to Bowyer (1888), and to Sladek (1898) show painters' scaffolds having a frame U-shaped at the bottom, and supporting a hoisting drum between the upright sides of the frame, the lower

U supporting directly the scaffold boards laid in them, without the intervention of putlogs. The evidence fairly establishes that in 1908, prior to Henderson's invention date, appellee, who owned the Murray and other patents for scaffolds, and had built up a large business in the supplying of scaffolds for the erection of high buildings, had furnished for the erection of the Blackstone Hotel at Chicago, scaffolds in which there was the U-shaped bar frame similar to that of Henderson, but with putlogs composed of two angle irons bolted together, the U frame extending down between them, and the connecting bolts resting on the top of the under web of the U, the floor boards of the scaffold being, as in Henderson, laid parallel to the building. This employment of the U bar did not change the position of Murray's machines, which, as shown in his patent drawings, was at right angles to the building. Henderson's contrivance having the ends of the putlogs laid directly in the U frames at 7, necessitates the setting of the frames parallel or broadside with the building.

The evidence of prior art does not show a complete scaffold wherein, as in Henderson, the pairs of frames are so disposed that putlogs are laid directly into the bottoms of the frames without the intervention of bolts or equivalent contrivances. The special advantages claimed for the Henderson combination over others were testified to be the saving of space in the width of the platform, greater security, and greater facility in the installation and removal of the scaffolding. All these, save the first, are quite dubious. There is in these drum machines necessarily considerable width of frame to accommodate the hoisting drum, which must be wide enough to hold 100 feet of cable. The frames and drums when set on the scaffold in pairs—two for each putlog—and at right angles to the building, might appreciably obstruct the width of the scaffold, and in so far as Henderson shows a combination wherein these drums might extend broadside of the building, he made advance to the extent that there was thereby effected substantial saving of room on the platform, although neither in the specifications nor the claims is mention made of the position of the drums with reference to the building wall.

We do not find in the prior art or in the prior use, any operative scaffold of this general nature which seems to embody all of the elements present in Henderson's combination. His advance, however slight, is not so wholly wanting in invention or novelty as to justify a finding contrary to the presumptive validity of the grant to him, and we therefore conclude that his claims in issue here are valid. The validity of these same claims was recently in issue in a suit in Nebraska wherein appellee herein was plaintiff and appellant Whitney defendant. The district court found for the defendant, but on appeal the Circuit Court of Appeals for the eighth circuit held the claims valid. *New York Scaffolding Co. v. Whitney*, 224 Fed. 452, although the district court for the western district of Pennsylvania, in a suit by appellee herein upon the same claims reached an opposite conclusion, holding the claims invalid as not disclosing invention, *New York Scaffolding Co. v. Libell-Binney*

Construction Co., October term, 1914, the decree therein having been recently affirmed by the Court of Appeals for the third circuit.

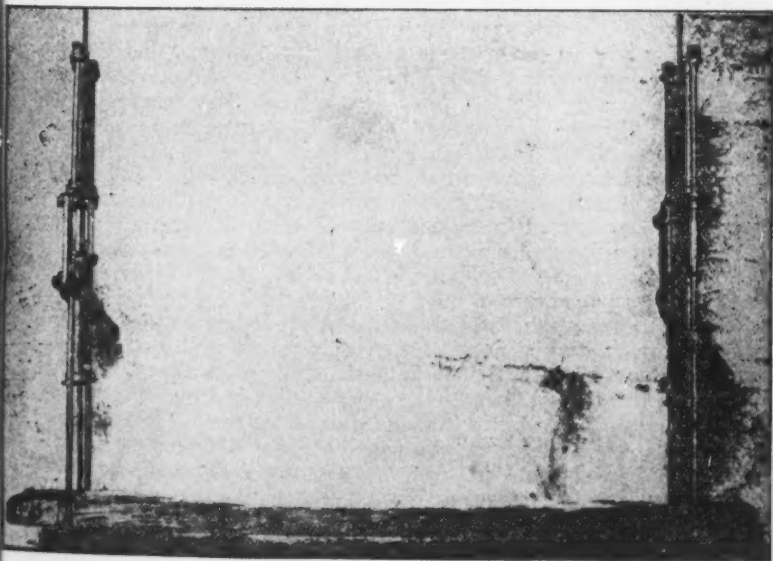
2. The infringement alleged is in the manufacture and sale of two articles known as the Whitney Scaffold Hoist and the Little Wonder machine, made pursuant to patents to Whitney, numbered respectively 998,270 (1911) and 1,114,832 (1914). These patents are for devices for hoisting scaffolds, and the suit here was brought against appellant, Chain Belt Co., on the claim that it manufactured the hoisting mechanism of these two patents, and knowingly sold or delivered them to users who would so apply and combine them with putlogs and scaffold floors, as thereby to present all the elements of the combination of Henderson's claims 1 and 3, whereby in such manufacture and sale there was contributory infringement by the Chain Belt Co. Appellant Whitney intervened, alleging that all the machines made by the Chain Belt Co. were made for him, that they had ceased making the Whitney Scaffold Hoist, that the Little Wonder did not infringe, and he asked that appellee be enjoined from prosecuting various suits it had instituted against users of the Little Wonder.

Upon the question of infringement we will consider first the Whitney Scaffold Hoist. This shows a hoisting drum revolubly mounted in a frame which has a straight rod or bar bolted to the lower ends of the frame. When this frame is used by setting it on the scaffold broadside to the building, putlogs may be laid in and held by the bottom of the frame, as is contemplated by the Henderson patent, and when in such position, the Henderson claims in issue are readable upon such structure, unless it may be said that the bottom of this Whitney frame, by being bolted to the sides, is not in effect the continuous U-shaped bar of Henderson. But in so far as the function of this bar is to support, by laying therein, the putlogs, it is not of essential materiality whether the continuousness of the frame is effected through one or several pieces of metal, or whether the corners are rounded or rectangular. Inasmuch as this bottom affords support extending around and holding the putlog laid therein, it does not seem important whether it is the precise bar described by Henderson, or its manifest equivalent, capable of performing this same function in the same manner as in the Whitney Scaffold Hoist, if otherwise all the elements of Henderson's combination appear. It was this same Whitney Scaffold Hoist whose manufacture and sale for the alleged purpose of its use in a like combination, was the contributory infringement charged in the above named Nebraska suit; and the circuit Court of appeals there further found that in such cases where the Whitney Scaffold Hoist having the drum was shown to have been made and sold to be set broadside of the building, and used in pairs with putlogs laid therein after the manner of the combination of the Henderson claims, it contributed to the infringement thereof, and should be dealt with accordingly.

It was sought to show by the evidence that the Whitney Scaffold Hoist was intended to be used, and in most instances was used, by setting it with its hoisting drum at right angles to the building, and

employing the double angle iron putlogs bolted together, with the bolts resting on the lower crosspiece of the frame as has been referred to in connection with the Murray hoist on the Blackstone Hotel job. While there was evidence that these frames and drums had been so used, there was also evidence of their use broadside of the building with wooden putlogs laid therein, as in Henderson, and some evidence which would warrant the conclusion that in some cases it was intended or expected that they would be so used broadside of the building, with putlogs. In such cases, if intended by appellants for such use, the alleged contributory infringement appeared, and notwithstanding there is no evidence of any manufacture or sale of the Whitney Scaffold Hoist for a period of nearly two years next before the filing of the bill herein, relief was properly granted for whatever of contributory infringement there appeared through evidence of the intended manufacture and sale of the Whitney Scaffold Hoist with hoisting drum, where intended by appellants for use broadside the building, with putlogs laid therein, as in Henderson, and due restraint against future offending in this respect was likewise properly decreed.

3. The Little Wonder machine shows a pair of side bars or rods about six inches apart with cross rods bolted to top and bottom, forming a rectangular frame, between the uprights of which there is a complicated mechanism having series of oppositely arranged toothed jaws operated by a lever. Below is a cut of "plaintiff's exhibit 20," which purports to be a photograph of a pair of the Little Wonders in actual use equipped with a putlog.



The cables shown are attached to outriggers, and may hang from the top to the bottom of the wall to be served by the scaffold. Moving the lever of the machine up and down, with a pump-handle motion, causes the mechanism alternately to release, clutch and hold the cables, and thereby raising or lowering the machine, very much as a man would climb a rope, leaving the frame firmly held to the cable at any desired point. In this mechanism there is no drum whatever, or anything like a drum. The cables remain suspended their entire length as they are hung from the outriggers, and there is no winding, and no occasion for any drum. In the use of the Little Wonder, there is thus omitted the element of the drum as included in the Henderson claims.

The charge of infringement is based on the identity of the frame of this machine with Henderson's U bar frame, the equivalency in the combination with the Little Wonder mechanism to the specified drum machine, and the manufacture and sale of the Little Wonder for intended use in scaffolds after the manner of the Henderson claims. The ends of this putlog have holes to accommodate the cables which must pass through. The putlog appears too wide for the frame, and seems to be cut out to accommodate the side rods. Indeed the evidence shows that in many, if not most instances there are two more holes in each end of the putlogs for the side rods to pass through, and that they are placed in position by first unbolting and removing the lower cross rod, putting the side rods through the holes made for them, and replacing and bolting the lower rod. In this wise the putlog is held absolutely, though not necessarily rigidly. While Henderson's claims do not, except inferentially, indicate that the putlogs should not be fastened to the frame, it appears from the file wrapper that after rejection of his claims the patent was finally granted partly on the representation by Henderson "that the connection between the U-shaped bar and the crossbeams is absolute and positive and no rivets, bolts or other auxiliary means are employed," from which it is inferable that his putlogs were held by the U bar alone without fastening of any kind such as the rods and cable may be said to constitute in the use of Little Wonder. While this alone might not patentably distinguish the two combinations, it is well to be considered in connection with other differences.

It is contended that while a drum is included as an element of the combination in each of the Henderson claims, yet this describes only the hoisting mechanism of the combination, and that any other hoisting mechanism would be its mechanical equivalent in the combination. Any substantial patentable advance shown in this patent bears a particular relation to the drum mechanism of the claims, not to be found in its relation towards the other mechanism under consideration. As has been pointed out, the drum construction is necessarily of considerable width to accommodate a drum wide enough to hold the cable to be wound thereon. The entire absence of the drum makes possible the comparatively extreme narrowness of the Little Wonder machine, rendering it practically immaterial in this respect, whether it is set at right angles or broadside to the building. If set

at right angles it would occupy scarcely more of the width of the platform than the Henderson machine set broadside.

The same question of infringement of these claims by this use of the Little Wonder was very recently before the federal court in Nebraska. The district court, in litigation between appellee here and Whitney, involving the same alleged infringement held it to infringe, but on appeal to the circuit court of appeals it was held, in an exhaustive opinion filed April 2, 1917, there was no infringement of Henderson, in any use of the Little Wonder, whether set at right angles or broadside. It is our view that the Little Wonder is not the mechanical equivalent of the drum mechanism stated in the claims in issue as an element of that combination, and that through the entire absence of the drum a scaffold equipped with the Little Wonder does not respond to the Henderson claims, and thus does not infringe.

We conclude that the decree of the district court is correct in finding the claims valid, and that there was contributory infringement of claims 1 and 3 by appellants, in making or selling the Whitney Scaffold Hoist, in those cases where made or sold with intent or knowledge on the part of appellants that they would be used in scaffolds in the manner of the Henderson patent as above pointed out; but that the decree is erroneous in finding infringement in the manufacture or sale or in any use of the Little Wonder machine.

The decree of the district court is therefore reversed, with direction to enter a decree in accordance with the foregoing views;—appellants and appellee each to pay half the costs of this appeal.

A true Copy.

Teste:

*Clerk of the United States Circuit Court
of Appeals for the Seventh Circuit.*

And afterwards, on the same day, to-wit: On the tenth day of August, 1917, in the October term last aforesaid, the following further proceedings were had and entered of record, to-wit:

FRIDAY, August 10, 1917.

Court met pursuant to adjournment.

Present:

Hon. Francis E. Baker, Circuit Judge, presiding.

Hon. Samuel Alschuler, Circuit Judge.

Edward M. Holloway, Clerk.

Before Hon. Francis E. Baker, Circuit Judge; Hon. Julian W. Mack,
Circuit Judge; Hon. Samuel Alschuler, Circuit Judge.

2408.

CHAIN BELT COMPANY and EGBERT WHITNEY

vs.

NEW YORK SCAFFOLDING COMPANY.

Appeal from the District Court of the United States for the Eastern
District of Wisconsin.

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Eastern District of Wisconsin, and was argued by counsel.

On consideration whereof, It is now here ordered, adjudged and decreed by this Court that the decree of the said District Court in this cause be, and the same is hereby reversed; and that this cause be, and the same is hereby remanded to the said District Court with direction to enter a decree in accordance with the opinion of this Court; and it is further ordered that the appellants and appellee each pay half the costs of this appeal.

United States Circuit Court of Appeals for the Seventh Circuit.

I, Edward M. Holloway, Clerk of the United States Circuit Court of Appeals for the Seventh Circuit, do hereby certify that the foregoing typewritten and printed pages, numbered from 1 to 15, inclusive, contain a true copy of the proceedings had and papers filed (except the briefs of counsel, the Stipulation as to record on appeal, which appears in the copy of the printed record certified herewith, and the Certificate of the Clerk of the District Court of the United States for the Eastern District of Wisconsin as to exhibits) in the case of Chain Belt Company and Egbert Whitney vs. The New York Scaffolding Company No. 2408, October Term, 1915, as the same remains upon the files and records of the United States Circuit Court of Appeals, for the Seventh Circuit.

In testimony whereof I hereunto subscribe my name and affix the seal of said United States Circuit Court of Appeals for the Seventh Circuit, at the City of Chicago, this fifth day of September A. D. 1917.

[Seal United States Circuit Court of Appeals, Seventh Circuit.]

EDWARD M. HOLLOWAY,
*Clerk of the United States Circuit Court
of Appeals for the Seventh Circuit.*

424 UNITED STATES OF AMERICA, *ss.*:

[Seal of the Supreme Court of the United States.]

The President of the United States of America to the Honorable the Judges of the United States Circuit Court of Appeals for the Seventh Circuit, Greeting:

Being informed that there is now pending before you a suit in which Chain Belt Company and Egbert Whitney are appellants, and New York Scaffolding Company is appellee, No. 2408, which suit was removed into the said Circuit Court of Appeals by virtue of an appeal from the District Court of the United States for the Eastern District of Wisconsin, and we, being willing for certain reasons that the said cause and the record and proceedings therein should be certified by the said Circuit Court of Appeals and removed into the Supreme Court of the United States,

425 Do hereby command you that you send without delay to the said Supreme Court, as aforesaid, the record and proceedings in said cause, so that the said Supreme Court may act thereon as of right and according to law ought to be done.

Witness the Honorable Edward D. White, Chief Justice of the United States, the twenty-third day of November, in the year of our Lord one thousand nine hundred and seventeen.

JAMES D. MAHER,

Clerk of the Supreme Court of the United States.

[Endorsed:] File No. 26,180. Supreme Court of the United States, October Term, 1917. No. 713. New York Scaffolding Company vs. Chain Belt Company and Egbert Whitney. Writ of Certiorari. Filed Dec. 31, 1917. Edward M. Holloway, Clerk.

426 In the United States Circuit Court of Appeals for the Seventh Circuit.

CHAIN BELT COMPANY and EGBERT WHITNEY, Appellants,

vs.

NEW YORK SCAFFOLDING COMPANY, Appellee.

Stipulation.

It is hereby stipulated between counsel for the respective parties that the certified transcript of record now on file in the United States Supreme Court, can be taken as a return to the writ of certiorari granted on the 19th day of November in the above entitled case, and that a certified copy of this stipulation may be sent up by the clerk of this court to the Clerk of the United States Supreme Court as a return to the writ addressed to this Hon. Court.

This stipulation is without prejudice to the right of either party to correct and supply any deficiencies that may appear in said record, if any should appear.

ROBT. H. PARKINSON,
WALLACE R. LANE,
Counsel for Appellant.
C. P. GOEPEL,
Counsel for Appellee.

Dec. 22nd, 1917.

Endorsed: Filed Dec. 28, 1917. Edward M. Holloway, Clerk.

427 UNITED STATES OF AMERICA,
Seventh Circuit, ss:

In obedience to the command of the foregoing writ of certiorari and in pursuance of the stipulation of the parties, a full copy of which is hereto attached, I do hereby certify and return that the transcript of the record filed with the application to the Supreme Court of the United States for a writ of certiorari in the case of Chain Belt Company and Egbert Whitney, appellants, vs. New York Scaffolding Company, appellee, is a full, true and complete transcript of the record upon which said cause was heard in the United States Circuit Court of Appeals for the Seventh Circuit, together with all proceedings in said Court.

In testimony whereof, I hereunto subscribe my name and affix the seal of said United States Circuit Court of Appeals for the Seventh Circuit, at the city of Chicago, this thirty-first day of December, A. D. 1917.

[Seal United States Circuit Court of Appeals, Seventh Circuit.]

EDWARD M. HOLLOWAY,
*Clerk of the United States Circuit Court of
Appeals for the Seventh Circuit.*

428 [Endorsed:] File No. 26180. Supreme Court U. S., October term, 1917. Term No. 713. New York Scaffolding Company, Petitioner, vs. Chain Belt Co. et al. Writ of Certiorari and Return. Filed Jan. 7, 1918.